

## THE UNIVERSITY OF ILLINOIS

LIBRARY

540.6

AM

Index

V.1-20

cop. 4

AGRICULTIVE

PARY





Digitized by the Internet Archive in 2016 with funding from University of Illinois Urbana-Champaign



#### THE JOURNAL

-OF THE-

### AMERICAN CHEMICAL SOCIETY.

#### GENERAL INDEX

TO THE

# FIRST TWENTY VOLUMES, . 1879-1898,

-AND TO THE-

PROCEEDINGS, 1877-1879.

EASTON, PA.: THE CHEMICAL PUBLISHING CO. 1902.



540.6 F. M Index, v. 1-20 CUB, 4

> THE earlier volumes of the Journal contained abstracts of papers which had appeared elsewhere. So many of the names of the authors of these papers were erroneously printed that we had to verify all such by reference to the original, unless it was already well known to us. They appear in this index in the correct form, with initials of Christian names supplied, if possible. When it could not be determined whether M. was an initial or the French equivalent of our Mr., it was printed [M.]. In a few cases, articles which it is suspected belong to the same author appear under entries slightly different in form; the two entries under Guyard, and the first and third under Monnet are examples. Had Monnet y Cos written more frequently, it would have been possible to resolve the doubt which prevented the placing all papers by a person under his name in its latest form, according to the established rule. In case of variety in ways of printing certain names, the Royal Society's Catalogue has commonly been followed. But the few Russian names cited have not been rescued from the confusion produced by transliteration into English from both French and German.

> In the index of authors, few liberties have been taken with titles, except in spelling uniformly certain words, such as benzene, on which probably all would now agree. In the index of subjects, it was thought desirable to secure somewhat more uniformity of spelling and nomenclature in the titles of

> The index has been printed from the original cards which had been prepared directly from the pages of the Journal and afterwards twice verified. Having been arranged alphabetically, they were made ready for the printer by cancelling words common to successive entries, and by changes in order of words and other slight modifications of expressions. In an index so prepared, the compiler sometimes satisfies himself with a sequence and relation of entries not quite so felicitous as if everything had been rewritten, but the figures submitted to the printer cannot be erroneous, except by becoming illegible. In our labor of love for the Society, we thought that accuracy of reference to page and volume was that most desired at our hands. The fact that the preparation of the index was divided somewhat equally between two compilers has lessened the uniformity of treatment which might have been secured otherwise.

> This index includes not only the twenty volumes of the Journal issued in the years 1879 to 1898 inclusive, but also the volumes of an earlier publication of the Society entitled "Proceedings of the American Chemical Society." This earlier publication consisted of two volumes, of which the first appeared in two parts paged separately. We have also made references to some statements of facts contained in the proceedings of the sections of the Society issued with the later volumes of the Journal; these references have the number of the page enclosed in a parenthesis. The volumes of the Journal are referred to by the numbers from 1 to 20. The volumes of the Proceedings are designated as follows:

P. I, Proceedings, Volume I, Part I, 1877. P. I, 2, Proceedings, Volume I, Part II, 1878. P. 2, Proceedings, Volume II, 1879.

E. W. M. O. F. T.



#### INDEX OF AUTHORS.

ABEL, Sir F. A., and W. H. Deering. On the condition in which car-
bon exists in steel (abst.), 5, 114: See also Noble, Sir A.
ADAM, A. Milk in the Paris hospitals (abst.), 8, 62
ADAM, P. Brominated xylenol (abst.), 6, 132: See also Grimaux, E.
ADAMS, F. D. Presence of chlorine in scapolites (abst.), - 1, 391
ADAMS, M. See Young, S. W.
ADAMS, M. A. New method for analysis of milk (abst.), - 8, 204
ADOR, E. iso-Phthalophenone (abst.), 2, 131, 367
ADOR, E., and J. M. Crafts. Action of phthalic anhydride on naph-
thalene in presence of aluminum chloride (abst.), - 1, 485
ADOR, E., and A. Rilliet. Hydrocarbons from methyl chloride and
toluene (abst.), 1, 280: Hydrocarbons obtained from methyl
chloride and benzene (abst.), 1, 398
AILLAUD. Analyses of water from Isthmus of Panama (abst.), - 4, 242
AITKEN, A. P. Rapid and accurate method of determining moisture
and oil in linseed cakes, etc., 16, 114
AKITT, T. See Mills, E. J.
ALBERT, H., and L. Siegfried. Determination of reverted phosphoric
acid (abst.), 1, 355
ALBITZKY, A. $\beta$ -Dipropylacrylic acid from $\beta$ -dipropylethylenelactic
acid (abst.), 7, 83: Coefficient of refraction of the hydrocarbon,
$C_{12}H_{20}$ , from allyldimethylcarbinol (abst.), 7, 85
ALEXÉEFF, P. Constitution of the nitro-compounds of the aliphatic
series (abst.), 8, 202, 274: Constitutional formula of indigo
(abst.), 6, 135
ALLARY, E. Iodimetry, founded upon the use of permanent standard
solutions (abst.), 1, 490: Regeneration of the acid residues from
the manufacture of guncotton (abst.), 9, 38
ALLEN, A. H. Estimation of nitrogen in steel (abst.), 1, 562: Deter-
mination of silicon in iron and steel (abst.), 1, 562: Expression of
results obtained by Koettstorfer's method, etc. (abst.), 1, 567: On
the stability of hypobromite solution, and its use for the titration
of oils, etc. (abst.), 6, 99: Methods of examining, and chemistry
of, the fixed oils (abst.), 8, 98, 103: Fat of porpoise milk (abst.),
8, 184: Determination of glycerol produced by saponification of
fatty oils (abst.), 8, 204: Determination of sulphur in oils (abst.),
10, 44: Detection of sacchariu in beer (abst.), 10, 88: Use of the
term "normal" in volumetric analysis (abst.), 10, 114: Examina-
tion of water for technical purposes (abst.), 10, 180
ALDEN, A. H., W. Chattaway, and W. Thomson. Adam's method for
milk analysis (abst.), 9, 13

ALLEN, E. W., and B. Tollens. Xylose and wood gum from straw,
etc. (abst.), 12, 158
ALLIHN, F. Rise of freezing-point in thermometers (abst.), - 12, 413
Alsop, W. K., and J. H. Yocum. Composition of the ashes of some
raw tanning materials, 20, 338
AMTHOR, C. Identification of carainel (abst.), 7, 62: Analyses of
Alsace-Lorraine wines of 1885 (abst.), 9, 219: See also Musculus, F.
ANDERSON, J. T. Identification of arsenic and antimony, - 13, 210
ANDRÉ, G. Magnesium oxychlorides, 4, 230: Heat of formation of
some oxychlorides and oxybromides of mercury (abst.), 6, 127:
New oxychloride of zinc (abst.), 4, 239: See also Berthelot, M.
ANDREAE, G. L. Temperature regulator (abst.), 1, 91: Solubility of
salts in water at different temperatures (abst.), 7, 27
ANDREWS, G. F. Notes on aluminum, 16, 485
Andrews, L. Analysis of alloys of lead, tin, antimony, and arsenic,
17, 869: Reduction of sulphuric acid by copper as a function of
temperature, 18, 251
ANDREWS, L. W. Ethylene iodopicrate (abst.), 2, 224
Andrews, W. H. See Campbell, E. D.
ANDREWS, W. W. Self-regulating gas generator, 17, 304: Extensions
of the plaster of Paris method in blowpipe analysis, 18, 849
ANGELBIS, A., and Anschütz, R. Synthesis of dimethylanthracene
hydride and diphenylethane (abst.), 6, 165: Action of aluminum
chloride on vinyl bromide or tribromide in benzene (abst.), 6, 166
ANSCHUTZ, R. Remarks on the paper of Angelbis and Anschütz on
the action of aluminum chloride on vinyl bromide, etc. (abst.),
6, 166: Remarks on chrysaniline (abst.), 7, 83: Acridine picrate
(abst.), 7, 84
ANSCHUTZ, R., and C. Bennert. Action of acetyl chloride and glacial
acetic acid on fumaric acid (abst.), 5, 18
ANSCHUTZ, R., and F. Eltzbacher. Synthesis of anthracene (abst.), 5, 132
ANSCHUTZ, R., and C. Romig. Nitration products of diphenylethane
(abst.), 8, 54
ANSCHUTZ, R., and G. Schultz. Phenanthrenequinone (abst.), - 2, 48
ANSCHUTZ, R. See also Angelbis, A.
ARCHBOLD, G. Preparation of paper pulp (abst.), 5, 122: Albumi-
noids of maize, 14, 313
ARCHBUTT, L. Analysis of grease (abst.), 10, 115
ARMSTRONG, H. E. Law of substitution in the naphthalene series
(abst.), 4, 206: Note on the formation and constitution of fulmi-
nates (abst.), 6, 46
ARNAUD, A. Investigations on the composition and nature of carotin
(abst.), 8, 204
ARNOLD, C. Estimation of nitrogen in nitrates and nitro-compounds
(abst.), 7, 91: Estimation of nitrogen (abst.), 8, 25
ARNOLD, J. O. Allen's method for the detection of hop substitutes in
beer (abst.), 9, 220

ARNOLD, J. O., and H. J. Hardy. Estimation of chromium in iron
and steel (abst.), 10, 66: Two methods for estimating sulphur in
steel (abst.), 10, 8
Aronheim, B. Action of nitrous acid on resorcinol ether (abst.),
1, 161; Schützenberger's acetates of chlorine and iodine (abst.), 1, 16
ARRHENIUS, S. On the validity of the Clausius-Williamson hypothe-
sis, etc. (abst.), 6, 7
Arsonval, A. D'. Determination of glucose in blood (abst.), - 1, 35.
ARTH, G. Oxidation of menthol by potassium permanganate (abst.),
6, 164: New reaction of ethyl carbonate (abst.), 6, 171: Two
properties of urethanes of the aliphatic series (abst.), 8, 16
ASBOTH, A. VON. Determination of starch (abst.), 9, 4
ASCHAN, O. Action of mustard oils on amido acids (abst.), - 7, 8
ATKINSON, ELIZABETH A. Metal separations by means of hydro-
bromic acid gas, 20, 797: Indium in tungsten minerals, - 20, 81
ATKINSON, ELIZABETH A., and E. F. Smith. Separation of iron from
beryllium, 17, 68
ATKINSON, R. W. Determination of phosphoric acid (abst.), 1, 538:
Some compounds of antimony and bismuth containing two halo-
gens (abst.), 5, 113: Notes on the volumetric estimation of iron
(abst.), 6, 24:
ATKINSON, R. W., and H. Yoshida. Peppermint camphor (menthol)
and some of its derivatives (abst.), 4, 14. ATTWOOD, G. Blowpipe assay of mercury ores (abst.), - 1, 37
ATTWOOD, G. Blowpipe assay of mercury ores (abst.),  ATWATER, W. O., and G. Warnecke. Determination of fats,  P. 2, 8.
AUBERT. See Lepine, R.
AUBRY. Detection of salicylic acid in beer (abst.), 1, 57
AUCHY, G. Volumetric estimation of manganese, 17, 943: Precipita-
tion of phosphomolybdate in steel analysis, 18, 170: Drown's
method of determining sulphur in pig iron, 18, 406: Sources of
error in determining manganese in steel, 18, 498: Determination
of phosphorus in steel and cast iron, 18, 955: Method for complete
analysis of iron ores, with notes on Särnström's method of deter-
mining manganese, 19, 139: Moist combustion method of deter-
mining carbon in steel, 20, 243: Error in carbon determinations
made with weighed potash bulbs, 20, 528: On Drown's method of
determining silicon in steel, 20, 54
AUDOVNAUD, A. Test for olive oil (abst.), 7, 250: Adulteration of
olive oil (abst.), 8, 4
AUGER, V. Action of oenanthaldehyde and oenanthyl chloride on
dimethylaniline in the presence of zinc chloride (abst.), - 9,
AUSTEN, P. T. A new specimen bottle, 18, 41
AUSTEN, P. T., and W. H. Broadhurst. Absorbent blocks, - 17, 47
AUSTEN, P. T., and W. A. Horton. Convenient form of universal
hand-clamp, 17, 61
AUSTEN, P. T., and F. A. Wilber. Determination of titanium in iron
ores, 4, 165; Clarification of water by alum (abst.), - 7, 200

Austin, A. Diamylbenzene (abst.), 1, 486
AUTENRIETH, W. Mixed acid anhydrides (abst.), 10, 13
AUWERS, K., and V. Meyer. Tetramethylsuccinic and trimethylglu-
taric acids (abst.), 12, 157
Auwers, K. See also Meyer, V.
AVERY, S., and B. Dales. Electrolytic determination of cadmium,
19, 379: Electrolytic determination of cadmium (note), - 19, 513
AVERY, S. See Nicholson, H. H.
AYRTON, M. Improvements in bleaching or purifying oils and grease
(abst.), 8, 43
BABCOCK, S. C. See Campbell, E. D.
BACHMAN, I. A. Improved methods of water analysis, 17, 296; Chem-
ical brick for Glover towers, 17, 360
BÄCKSTRÖM, H., and G. Paykull. Volume and quantity of carbon in
the gases evolved by solution of iron in acids (abst.), 10, 25
BAEKELAND, L. Use of fluorides in the manufacture of alcohol, 14, 212
BAER, S. H., and A. B. Prescott. Dipyridine methylene iodide, etc., 18, 988
BAER, S. H. See Prescott, A. B.
BAEYER, A. Reaction for isatin (abst.), 1, 543: Compounds of the
indigo group (abst.), 4, 175; 5, 21
BAEYER, A., and V. Drewsen. Preparation of indigo-blue from o-nitro-
benzaldehyde (abst.), 5, 63
BAEYER, A., and O. R. Jackson. Synthesis of homologues of hydro-
carbostyril and quinoline (abst.), 2, 170: Synthesis of methylke-
tole, an isomer of skatole (abst.), 2, 174
BAEVER, A., and L. Landsberg. Syntheses by means of phenylacety-
lene and its derivatives (abst.), 4, 176, 206 BAEYER, A., and C. Pape. Derivatives of o-xylene (abst.), - 7, 115
BAEYER, A., and C. Pape. Derivatives of o-xylene (abst.), - 7, 115
BAEYER, A., and W. H. Perkin, Jr. On benzoylacetic acid (abst.),
6, 84; On the derivatives of hydrindonaphthene (abst.), 6, 87, 160:
Syntheses of naphthalene derivatives (abst.), 7, 115
BAIRD, J. W. Dictionary of the action of heat upon metallic salts,
with references to the literature, 5, 135
BAIRD, W. H. See Stone, W. E.
BAITHER, O. Tetramethyldiamidothiobenzophenone (abst.), - 10, 40
Balbiano, L. Amides and anilides of $\beta$ -oxybutyric acid (abst.),
2, 367; Synthesis of pyrazole (abst.), 12, 233
BALLAND. Palm wine from Algeria (abst.), 1, 402; Presence of alka-
loids in old flours (abst.), 8, 167
BALLING, C. M. Determination of silver in galena by Volhard's
method (abst.), 1,562
Ballo, M. Action of dehydrating bodies on camphoric acid and its
amides (abst), 1, 397; 2, 187: On carbonic acid hydrate (abst.),
5, 64; Remarks on the chemistry of plants (abst.), - 6, 93
BALLY, O. Phenylated piperidine and pyridine-bases (abst.), - 9, 196
BALSOHN, M. Action of ethylene on benzene in presence of alu-

minum chloride (abst.), 1, 390: Synthesis of ethylbenzene by
means of ether and benzene (abst.), 2, 92: See also Friedel, C.
BAMBERGER, E. Color reaction for o-diketones (abst.), 8, 58; Note
on camphoric acid (abst.), 12, 161: Decomposition of alicyclic 1:5-
tetrallydronaphthylenediamine into optically active components
(abst.), 12, 164
BAMBERGER, E., and S. C. Hooker. Retene (abst.), - 7, 227
BAMBERGER, E., and W. Lodter. Action of carbon disulphide on
menthol and borneol (abst.), 12, 161
BANNOW. A. Pure butyric acid (abst.), 9, 6
BARBIER, P. Action of acetic anhydride on some aldehyde-phenols
(abst.), 2, 130
BARBIER, P., and L. Roux. Action of heat on acetones (abst.), 8, 200
BARBIER, P., and L. Vignon. Researches on phenosafranine (abst.),
9, 170: Preparation of safranines (abst.), 10, 22: Preparation of
substituted safranines (abst.), ro, 22
BARDY, C., and L. Bordet. Preparation of methyl formate and pure
methyl alcohol (abst.), 1, 389; Determination of methyl alcohol
in commercial wood spirit (abst.), 1, 486, 579
BARKER, G. F. The borderland between physics and chemistry
(presidential address), 13, II
BARR, K. L. See Wills, E. J.
BARTH, L. von, and J. Schreder. Diphenols (abst.), - 1, 293
BARTH, M. See Nessler, J.
BARTLEY, E. H. A rapid method of estimating urea in urine, 12, 283:
Rapid estimation of uric acid in urine, 19, 649
BARTOLI, A., and G. Papasogli. Synthesis of organic compounds by
electrolysis, etc., (abst.), 4, 239
BARTON, G. E. Examination of glycerol for use in the nitroglycerol
manufacture, 17, 277; Arsenic in glycerol, 17, 883; Manufacture
of dynamite, 19, 500; Volumetric apparatus, 20, 731
BASKERVILLE, C. Separation of titanium from iron, 16, 427: Separa-
tion of zirconium by means of sulphurous acid, 16, 475: Reac-
tions between copper and concentrated sulphuric acid, 17, 904:
Reduction of concentrated sulphuric acid by copper, 18, 942
BASKERVILLE, C., and F. W. Miller. Reactions between mercury
and concentrated sulphuric acid, 19, 873; Decomposition of con-
centrated sulphuric acid by mercury at ordinary temperatures, 20, 515
BASKERVILLE, C. See Venable, F. P.
BASSETT, L. L. See Fleck, H.
BATTERSHALL, S. P. Note on fibrous sodic chloride, - P. 2, 141
BAUBIGNY, H. Existence and formation of nickel protosesquioxide
(abst.), 1, 295: Action of insoluble sulphides on nickel sulphate,
etc. (abst.), 4, 239: Action of hydrogen sulphide on nickel chlo-
ride (abst.), 4, 240: Preparation of chromium sulphate (abst.), 6,
78: Equivalent of chromium, determined from the sulphate (abst.),
6, 127: On the oxidation and determination of chromium (abst.),
o, 127. On the oxidation and determination of chromium (abst.), 0, 130

Behr, A. Occurrence of aconitic acid in cane-juice and raw sugar,
P. 1, 220: Crystallized anhydrous grape sugar, 4, 11
BEHREND, P. Action of sulphuryl chloride on alcohols (abst.), 2, 136
Brilby, G. Specific gravity of paraffin, solid, fused, and in solution
(abst.), 5, 236
Brilstein, F. Separation of nickel from zinc (abst.), 1, 332: Dini-
troparatoluidine (abst.), 2, 224
Beilstein, F., and I. Jawein. Determination of zinc by electrolysis
(abst.), 1, 330: Electrolytic determination of cadmium (abst),
1, 330: Separation of manganese from iron (abst.), - 1, 533
Beilstein, F., and A. Kurbatow. Chloranilines and chlornitranilines
(abst.), 2, 57; Behavior of some nitro compounds towards hydro-
gen sulphide (abst.), 2, 178; Dinitronaphthalene (abst.), 2, 369;
Dinitrobenzoic acid (abst.), 2, 369
BEIN, S. Coloring-matter in yolk of eggs (abst.), 12, 165: Quantita-
tive determination of egg substance (abst.), 12, 176
Beketoff, N. N. Relations dependent on atomic weight (abst.), 6, 128
BELDEN, A. W. See Venable, F. P.
BELDEN, A. W. See Venaule, F. P.
BELL, J. C. Analysis of flour and bread (abst.), 1, 566: Analyses of
tea (abst.), 4, 189
BELLENOT, G. See Perkin, W. H., Jr.
BENCKISER, T. See Nietzki, R.
BENEDICT, C. H. See Dennis, L. M.
BENEDICT, F. G., and R. S. Norris. Determination of small quanti-
ties of alcohol, 20, 293
BENEDIKT, R., and M. Cantor. Determination of glycerol (abst.), 10, 196
BENEDIKT, R. See Weselsky, P.
Benker. See Lasue.
Benkert, A. L., and E. F. Smith. Separation of bismuth from
,
BENNETT, A. A., and E. E. Pammel. Study of some gas-producing
bacteria, 18, 157
BENNETT, A. A., and L. A. Placeway. Determination of chlorine,
bromine, and iodine, in mixtures, 18, 688
Bennert, C. See Anschütz, R.
BENTLEY, W. B. See Menke, A. E.
Beran, A. p-Amidooctylbenzene, p-amidocaprylbenzene, and an
amidooctyltoluene (abst.), 7, 176
BERG, P. von. Separation of zinc from iron, cobalt, and nickel
(abst.), 9, 9: Determination of the sulphides of zinc and cad-
mium (abst.), 9, 35
BERGHE, J. VAN DER. Copper normally present in wheat (abst.), 4, 188
BERGLUND, E. Method for separating tin, antimony, and arsenic
(abet ) 6 08: Quantitative constraint of ablasing and beautiful
(abst.), 6, 98: Quantitative separation of chlorine and bromine (abst.), 7, 178
Bering, H. Determinations of solids in milk (abst.), - 1, 357
Bernhardt, W. On condensations.

Bernthsen, A. Amidines and thiamides of monobasic organic acids		
(abst.),		188
BERNTHSEN, A., and G. Friese. Normal dithiourethanes (abst.)		268
BERNTHSEN, A., and W. Hess. Ammonium bases derived from	47	
quinoline (abst.),	7.	119
BERT, P., and P. Regnard. Action of hydrogen dioxide in organic		,
matter and on fermentation (abst.),		239
BERTHELOT, M. Researches on ozone and electricity (abst.), 1, 171:		
Formation of ethereal salts of hydracids in the gaseous state		
(abst.), 1, 172: Heat disengaged by combining carbon monoxide		
with other bodies (abst.), 1, 279: Specific heat and heat of fusion		
of gallium (abst.), 1, 279: Reciprocal displacement between weak		
acids (abst.), 1, 279: Rotary power of styrolene (abst.), 1, 279: Rela-		
tive affinities and reciprocal displacement of oxygen and the halo-		
gens (abst.), 1, 280: Decomposition of hydracids by metals (abst.),		
1, 384: Reciprocal displacements between oxygen, sulphur, and		
the halogens, when combined with hydrogen (abst.), 1, 385:		
Role of auxiliary acids in etherification (abst.), 1, 386: Direct		
combination of cyanogen with hydrogen and the metals (abst.),		
1, 398; 2, 92: Remarks on memoir of Noble and Abel on the com-		
bustion of gunpowder (abst.), 1, 401: Remarks on communication of A. Wurtz on chloral hydrate (abst.), 1, 402: Thermochem-		
ical data (abst.), 2, 88: Epichlorhydrin (abst.), 2, 93: Persul-		
phuric acid; its formation by electrolysis (abst.), 2, 362: Heat of		
formation of persulphuric acid (abst.), 2, 363: Decomposition of		
hydrogen peroxide in presence of alkalies, and on derivatives of		
barium dioxide (abst.), 2, 365: Chemical stability of matter under		
the influence of sonorous vibrations (abst.), 2, 433: Heat of for-		
mation of ammonia (abst.), 2, 433: Heat of formation of oxides		
of nitrogen (abst.), 2, 433: Double salts formed by haloid mer-		
cury salts (abst.), 4, 208: Double salts of mercury (abst.),		
4, 231, 232: Decomposition of haloid mercury salts, etc. (abst.),		
4, 233, 234: Haloid salts of silver and potassium (abst.), 4, 235:		
Union of free hydrogen with ethylene (abst.), 4, 235: Transfor-		
mation of carbon oxysulphide into urea and thiourea (abst.),		
4, 236: Absorption of gases by platinum (abst.), 4, 239: Electrol-		
ysis of hydrogen dioxide (abst.), 4, 240: Themochemistry of lead		
iodide (abst.), 5, 120: Remarks on thermochemical results (abst.),		
6, 34: Heat of formation of fluorides (abst.), 6, 74: On Faraday's		
law (abst.), 6, 156: Rate of propagation of detonation in solid and liquid explosives (abst.), 7, 93: On the principle of maximum		
work (abst), 7, 138: Thermochemical data on phenols (abst.),		
8, 34: Fixation of atmospheric nitrogen by argillaceous soils		
(abst.), 8, 18: Contributions to a knowledge of sulphur and mer-		
cury (abst.), 8, 20: Researches on antimony sulphide (abst.),		
o, 5: Direct fixation of nitrogen of the air by vegetable soils		

(abst.), 10, 12: Researches on drainage (abst.), 10, 12: Note on

mellitose (abst.), 12, 71: Fixation of atmospheric nitrogen by
plants (abst.), 12, 72
plants (abst.), 12, 72  Berthelot, M., and (G.) André. On carbonates in living plants
(abst.), 8, 21: Determination of oxalic acid in vegetable matter
(abst.), 8, 37: Relations between the formation of oxalic acid in
plants and of albuminoid matter (abst.), 9, 7: Displacement of
ammonia by magnesia (abst.), 9, 99: On the nitrogenous princi-
ples of vegetable soil (abst.), 9, 104: Decomposition of amines
(abst.), 9, 104: Researches on the emission of ammonia by vege-
table soils (abst.), 10, 12
BERTHELOT, M., and C. Fabre. On the different forms of tellurium
(abst.), 10, 10: Heat of formation of hydrotelluric acid (abst.), 10, 10
BERTHELOT, M., and M. Guntz. Absorption of chlorine by carbon,
and (on its) combination with hydrogen (abst.), - 7, 148
BERTHELOT, M., and L. Ilosvay. Double salts prepared by fusion
(abst), 4, 239
BERTHELOT, M., W. Louguinine, and A. Recoura. Calorimetric
measurements (abst.), 10, 15
BERTHELOT, M., and P. Vieille. New method of measuring the heat
of combustion of carbon, etc. (abst.), 7, 146: Heat of combustion
BERTHELOT, M., and E. Werner. Heat of neutralization of polyhy-
dric phenols (abst.), 7, 119: Heat of neutralization of hydroxy-
benzoic acids (abst.), 8, 21: On the hydroxybenzoic acids, and
their heat of formation and transformation (abst.), 8, 22
BERTRAND, A. Volumetric determination of active oxygen in barium
dioxide and oxygenated water (abst.), 2, 132: Reactions of tita-
nium tetrachloride, stanuic chloride, and antimonic chloride on
acetic acid and acetic anhydride (abst.), 2, 363: Compound of ti-
tanium tetrachloride with acetyl chloride (abst.), 2, 430: Combi-
nation of titanium tetrachloride with phosphorus trichloride
(abst.) 2, 434: Reduction of ethyl nitrate by alcohol (abst.), 2,
434: Compound of titanium tetrachloride with ethyl oxide (abst.), 2, 434
BETTEL, W. Estimation of organic nitrogen in waters, beers, etc.
BETTEL, W. Estimation of organic nitrogen in waters, beers, etc.  (abst.) 4, 162
(abst.), 4, 162
(abst.), 4, 162 BETTENDORFF, A. Detection of sodium phosphate in glacial phos-
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128  BEUTELL, A., and F. W. Dafert. A burette without graduations (abst.), 9, 17
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128  BEUTELL, A., and F. W. Dafert. A burette without graduations (abst.), 9, 17  BEVAN, E. J. See Cross, C. F.: See also Green, A. G.
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128  BEUTELL, A., and F. W. Dafert. A burette without graduations (abst.), 9, 17  BEVAN, E. J. See Cross, C. F.: See also Green, A. G.  BEYER, C. A quinoline homologue (abst.), 7, 145
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128  BEUTELL, A., and F. W. Dafert. A burette without graduations (abst.), 9, 17  BEVAN, E. J. See Cross, C. F.: See also Green, A. G.  BEYER, C. A quinoline homologue (abst.), 7, 145  BIDAUX, R. See Guyot, P.
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128  BEUTELL, A., and F. W. Dafert. A burette without graduations (abst.), 9, 17  BEVAN, E. J. See Cross, C. F.: See also Green, A. G.  BEYER, C. A quinoline homologue (abst.), 7, 145  BIDAUX, R. See Guyot, P.  BIDET, A. Continuous preparation of oxygen (abst.), - 8, 21
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128  BEUTELL, A., and F. W. Dafert. A burette without graduations (abst.), 9, 17  BEVAN, E. J. See Cross, C. F.: See also Green, A. G.  BEYER, C. A quinoline homologue (abst.), 7, 145  BIDAUX, R. See Guyot, P.  BIDET, A. Continuous preparation of oxygen (abst.), - 8, 21  BIECHELE, M. Criterion of purity of spices (abst.), 1, 570
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128  BEUTELL, A., and F. W. Dafert. A burette without graduations (abst.), 9, 17  BEVAN, E. J. See Cross, C. F.: See also Green, A. G.  BEYER, C. A quinoline homologue (abst.), 7, 145  BIDAUX, R. See Guyot, P.  BIDET, A. Continuous preparation of oxygen (abst.), - 8, 21  BIECHELE, M. Criterion of purity of spices (abst.), - 1, 570  BIGELOW, W. D. Coloring-matter in California red wines, 17, 213:
(abst.), 4, 162  BETTENDORFF, A. Detection of sodium phosphate in glacial phosphoric acid (abst.), 10, 66  BETZ. Sensitiveness of silver bromide to light (abst.), - 6, 128  BEUTELL, A., and F. W. Dafert. A burette without graduations (abst.), 9, 17  BEVAN, E. J. See Cross, C. F.: See also Green, A. G.  BEYER, C. A quinoline homologue (abst.), 7, 145  BIDAUX, R. See Guyot, P.  BIDET, A. Continuous preparation of oxygen (abst.), - 8, 21  BIECHELE, M. Criterion of purity of spices (abst.), 1, 570

liydroxide and aluminum phosphate, on the digestibility of bread, 16, 587
BIGELOW, W. D., and K. P. McElroy. Estimation of sugars in con-
densed milk, 15, 668
BIGELOW, W. D. See also Wiley, H. W.
BILLITZ, G., and K. Heumann. Preparation of pyrosulphuryl chlo-
ride and chlorosulphonic acid (abst.), 5, 126
BINDER, F. See Fittig, R.
BINDER, O. Water analysis (abst.), 9, 219
BINZ, C., and H. Schulz. Chemical cause of the poisonous nature of
arsenic 2, 115
BIRNBAUM, K., and H. Reinherz. Action of iodine on the silver salts
of some aromatic acids (abst.), 4, 264
BISCHLER, A. Condensation products from p-toluidine and p-nitro-
benzaldehyde (abst.), 10, 41
Bischof, A. See Liebermann, C.
BISCHOF, G. Colorimetric determination of traces of lead (abst.), 1, 87
BISCHOF, O. See Wallach, O.
BISCHOFF, C. See Weyl, T.
BISHOP, H. A. Hydrogen sulphide generator, 16, 48
BLADIN, J. A. Action of cyanogen on the toluidines (abst.), 6, 38:
On cyanogen compounds of the aromatic o-diamines (abst.), - 7, 245
BLAIR, A. A. Determination of carbon in steel, 18, 223: Determina-
tion of sulphur in pig iron, 19, 114
BLAIR, A. A., and J. E. Whitfield. Amnionium phosphomolybdate
and the reducing action of zinc, 17, 747
BLANK, A. See L. Knorr.
BLAREZ, C. Acidimetric determination of sulphurous acid, etc.
(abst.), 8, 180
BI,AS, C. Detection of salicylic acid in beer (abst.), - 1, 294
BLASDALE, W. C. Properties of some California oils, 17, 935
BLEUNARD, A. Action of trimethylamine on carbon disulphide
(abst.), 1, 294
BLEUNARD, A., and G. Vrau. Action of iodine on naphthalene at a
high temperature (abst.), 4, 232
BLINKS, W. M. See Noyes, W. A.
BLOCHMANN, R. Concentration of reagents (abst.), - 12, 175
BLOMÉN, J. E. Some practical points in the manufacture of nitroglyc-
erol, 17, 263: Manufacture of soluble nitrocellulose for nitrogela-
tine and plastic dynamites, 17, 411: See also Krug, W. H.
BLONDONNEAU, I. Determination of water in starch (abst.), 6, 137
BLOXAM, C. L. Identification of minute quantities of silver cyanide
(abst.), 5, 245: Estimation of manganese in cast iron and spiegel
(abst.), 6, 242
BLOXAM, W. P. See Thomson, J. M.
BLUM, L. Direct separation of manganese from iron (abst.), 9, 10:
Determination of aluminum in the presence of iron and phos-
phoric acid (abst.), 10, 66: Determination of sulphur in coke
phone acid (abst. ), 10, 00 . Determination of surprise in conc

(abst.), 10, 155: Adulteration of Thomas slag (abst.), - 12, 413
BLYTH, A. W. Detection of alum in bread (abst.), - 4, 188
BOCKAIRY, P. Detections of falsification in butter (abst.), - 10, 87
BOCKLISCH, O. Ptomaines from putrefying fish (abst.), - 7, 175
BODEWIG, C. Estimation of boric acid in borosilicates (abst.), 6, 239:
See also La Coste, W.
BODLÄNDER, G., and J. Traube. Limits of fusel oil in spirituous liq-
uors (abst.), 9, 17
BODMER, R. See Stokes, A. W.
Boeck, G. de. See Spring W.
BÖCKMANN, E. To cut glass tubing, etc. (abst.), 9, 10
BÖCKMANN, F. Determination of sulphur in pyrites (abst.), - 4, 161
BÖHRINGER, C. See Forst, C.
BÖRNSTEIN, E. Oxidation of glycerol in an alkaline solution, and
preparation of pure glyceric acid (abst.), 8, 64
BÖTTINGER, C. Contribution to history of glyoxylic acid (abst.), 1,
395: Contribution to knowledge of pyroracemic acid (abst.), 2,
53: Pyridine derivatives (abst.), 6, 83: Pyridine compounds ob-
tained by condensation (abst.), 6,83: Behavior of pyrotartaric
acid with bromine (abst.), 6, 308
BOGERT, M. T. Preparation of heptyl thiocyanate, 18, (75): Charles
Edwards Colby (obituary) 20, 139
Boggs, T. R. See Herty, C. H.
Bohlig, E. Modes of combination of elements indicated in water
analysis (abst.), 1, 336: New method of determining chlorine vol-
umetrically (abst.), 7, 209
BOISBAUDRAN, Lecoq de. See Lecoq de Boisbaudran, P. E.
BOISSIEU, P. de. On the water of crystallization of alums (abst.), 9,
100: Preparation of tetraphenylethylene (abst.), 10, 81; Methyl-
iodoform (abst.), 10, 114
Bokorny, T. See Loew, O.
BOLLERT, A. See Liebermann, C.
Bolton, H. C. Exhibition of alchemical medals, 13, 30: Experimen-
tal chemistry in the eighteenth century (title of a lecture), 13,
262; International index to chemical literature, 15, 574: Early
American chemical societies, 19, 717: Two British patents—"Get-
ting Gold from Wheat," and "Divining the Presence of Precious
Metals," 19, (23)
BONDZYNSKI, S., and H. Rufi. Butter fat (abst.), 12, 118
Bong, G. Decomposition of silicates by fusion with litharge (abst.), 1, 334
Boot, J. C. A new form of pyknometer, 19, 61
BOOTH, J. C. A general method of toughening gold in the melting
crucible, 6, 182, 210: Manufacture of graphite crucibles, 6, 283;
7, 4: Smelting furnace of the United States mint, - 7, 159
BORDEN, J. L. See Wood, J.
BORDET, L. See Bardy, C.

BORGMANN, E. Determination of glycerol in sweet wines (abst.), 4,
191: Examination of spices (abst.), 10, 70: See also Fresenius, R.
BORICKY, E. Microchemical analysis of minerals and rocks (abst.), 1, 95
BORNTRÄGER, A. Determination of potassium acid tartrate in lees,
etc. (abst.), 9, 120: Criticism of the direct methods for determin-
ing tartaric acid in lees, argols, etc. (abst.), 10, 23; Examination
of alcohol (abst.), 12, 118, 119; Reactions of resorcinol and thy-
mol (abst.), 12, 502
Bosshard, E. Determination of nitrogen by the Kjeldahl method
(abst.), 7, 179
BOTHAMLEY, C. H., and G. R. Thompson. Estimation of chlorates
by the zinc-copper couple (abst.), 10, 26
BOTT, W. The three isomeric pyrocresols (abst.), 9, 195
BOTTOMLEY, J. Source of error in colorimetry (abst.) 1, 379
BOUCHARDAT, G., and J. Lafont. On lemon oil (abst.), 7, 247: Action
of acetic acid on French oil of turpentine (abst.), 8, 71: Transfor-
mation of oil of turpentine into optically active terpilene (abst.),
8, 72: New synthesis of an inactive borneol (abst.), 8, 73: Syn-
thesis of an inactive terpilenol (abst.), 8, 183: Active camphenol
and ethylborneol (abst.), 9, 114: Transformation of terpilenol
into a menthenol (abst.), 10, 191
BOUILHON, E. Detection of fuchsine in wine (abst.), - 1,575
BOURCART, R. Action of ammonia upon anthraquinonesulphonic acid
(abst.), 2, 365: Printing of natural indigo on calico (abst.), 6, 104:
The dyeing properties of anthragallol (abst.), 6, 142
Bourgeois, L. Manufacture of crystallized barium chromate (abst.),
1, 279: On crystallized barium and strontium titanates (abst.), 8,
178: Methods for preparation of crystallized carbonates (abst.),
9, 33: Preparation of crystallized neutral lead chromate (abst.),
9, 110: Reproduction of celestine and anglesite by the wet process
(abst.), 10, 113: See also Spring, W., and Verneuil, A.
BOURGOIN, E. Curve of solubility of salicylic and benzoic acids (abst.),
1, 272: Bromeitraconic acid (abst.), 1, 280: Elimination of bro-
mine from bromeitraconic acid, and on a new organic acid (abst.),
2, 88: Solubility of benzoic and salicylic acids (abst.), 2, 88:
Electrolysis of malonic acid (abst.), 2, 431: Preparation of ma-
lonic acid (abst.), 2, 435: Action of potassium cyanide on potas-
sium trichloracetate (abst.), 4, 231
Bourgougnon, A. Pennsylvania petroleum, P. 1, 91: Determination
of naphtha in crude petroleum, P. 1, 119: Areometers, P. 1, 2,
40, 48: Petroleum and its examination, 1, 188: Analyses of cal-
culi, etc., 4, 215: Michel Eugène Chevreul (eulogy), 11, 71: On
the reaction of hydrogen peroxide with potassium permanganate
in the presence of sulphuric acid, 11, 94: The commercial manu-
facture of hydrogen dioxide and its applications, 12, 64: On con-
densed milk, 13, 160: Early mention of areometers, 13, 252: Ap-
plication of graphic methods in certain chemical studies, - 14, 128

Bourgougnon, A., and J. A. Mandel. Ohio petroleum, 13	, 168
BOUTY, E. Electrical conductivity of dilute salt solutions (abst.),	
BOVET, V. Antiseptic qualities of pyrogallol (abst.), I	
BOWEN, H. C. The penetration machine; an explanation, - 17	, 218
BOWER, H. Chemical Industry of the United States, 15	, 563
BOWMAN, J. W. See Mason, W. P.	
BOYER, C. S. Accuracy of the dyeing test, 17, 468: Interpretation of	
	, 518
BRADBURY, R. H. Reaction between molybdic acid and potassium	
chromate, 16	, 565
Brand, A. Use of bromine for decomposing sulphides (abst.), 9, 35:	
Use of double pyrophosphates in electrolytic separations (abst.), 12	, 168
Brass, W. See Wallach, O.	
BRAUNER, B. On didymium (abst.), 4, 240: Contributions to chem-	
istry of the cerite metals (abst.), 4, 169, 176; 5, 113: Atomic	
	, 129
BRAUNER, B., and F. Tomicek. Action of hydrogen sulphide on ar-	
senic acid (abst.),	, II
Bregowsky, I. M. See Ford, A. P.	
	, 369
Breneman, A. A. Review of industrial chemistry, 4, 72: New de-	
vice for the determination of carbon in cast iron, 5, 56: Apparatus	
for rapid gas analysis, 5, 76: Tubes of colored glass for Nessler-	
izing, 6, 121: Analysis of a mineral water, 6, 123: Contributions	
to the study of the New York water supply, 8, 3: Examination of	
Croton water, 8, 157: Necessity of standard conditions in the ap-	
plication of Wanklyn's method of water analysis, 8, 221: Note on	
a sample of old butter, 9, 3: On the fixation of atmospheric nitro-	
gen, 11, 2, 31: On the alleged sterilization of river water by mine	
water, 12: Lecture experiments, 12, 48: Editorial, 12, 4:	
Notes on water analysis by the ammonia method, with some new	
apparatus, 12, 457: Improved burette holder, 14, 15: A remarka-	
ble water for public use, 12	, 34
Broadhurst, W. H. See Austen, P. T.  Broesicke, G. Staining microscopic preparations (abst.),	0.
	, 584
BROOCKMANN, K., and K. Polstorff. Action of potassium permanga-	, 90
nate on morphine (abst.), 2, 98: Action of air on morphine in am-	
moniacal solution (abst.), 2, 98: Methylmorphine hydroxide, 2,	
0 0 1 11 1	2, 98
Brown, F. D. Value of different method of fractional distillation	, 90
/ 4 / 3	2, 345
	5, 244
Brügelmann, G. Conversion of thiosulphates into sulphates by	, -44
	<b>5</b> , 96
BRÜHL, J. W. Limits of application of methods of vapor density esti-	. ,-
mation in barometric vacuum (abst.), 1, 292: Limits to employ-	
ment of method of determining vapor-densities in barometric	

vacuum (abst.), 1, 380: New process for purification of mercury,
1, 292, 377, 378: Preparation of divaleryl (abst.), 1, 397: Rela-
tions between physical properties and chemical constitution, etc., 2, 118
BRÜHL, J. W., and V. Zenger. See Wiedemann, G. H.
Brugnatelli, T. Rapid evaporation of liquids (abst.), - 1, 90
BRUHNS, G. Adenine and hypoxanthine (abst.), 12, 161
BRUNCK, H., and C. Graebe. Soluble alizarin blue (abst.), - 5, 51
BRUNEAU, B. See Rousseau, G.
BRUNNER, H. Preparation of coloring-matters by action of aromatic
nitrosubstitution products on phenols, etc. (abst.), 4, 205
Brunner, H., and E. Chuard. $\beta$ -Amidoalizarin (abst.), - 7, 229
Brunner, H., and W. Robert. On phenol dyestuffs (abst.), - 7, 229 Brunton, T. L. Physiological action of brucine and bromostrych-
nine (abst.), 7, 116
BRUSH, C. F. A new gas (etherion), 20, 899
BRUSH, G. J., and E. S. Dana. Two new mineral species (abst.), - 1, 392
BRYANT, A. P. Separating phosphoric acid derived from bone from
that derived from rock phosphate, 18, 491: See also Day, W. C.
Buchanan, J. See Mills, E. J.
BUCHNER, M. Adulteration of beeswax (abst.), 1, 361
BÜCHNER, E. W. Contributions to the history of ultramarine (abst.), 1, 395
BUISINE, A. Composition of suint (abst.), 8, 185: Transformation
produced in suint waters (abst.), 8, 203: Volatile acids of suint
(abst.), 9, 173 : See also Duvillier, E.
BUJARD, A. See Klinger, A.
BUNGENER, H. Bitter principles of hops (abst.), 8, 97
BUNSEN, R. W. Separation of antimony from arsenic (abst.), 1, 332
Burr, H. C. See Smith, E. F.
BUSH, C. S. Degras, 16, 535 BVK, S. Desulphurization of guanidine thiocyanate (abst.), - 2, 134
BYLERT, A. van. Quantitative determination of antimony by Marsh's
test (abst.), 12, 476
CADY, H. P., and A. P. Ruediger. Modification of the permanga-
nate method for determination of iron, 19, 575
CAHOURS, A., and E. Demarçay. Stannobutyl and stannoamyl
iodides (abst.), 1, 399: Decomposition of fatty acids by super-
heated steam (abst.), 1, 403: Formation of sebacic and suberic
acids from crude fatty acids, etc. (abst.), 4, 233
CAILLETET, L. Compressibility of gases (abst.), 1, 172: Ethylene
for production of low temperatures (abst.), 4, 238
CAILLOL DE PONCY, O., and C. Livon. Chronic poisoning by anti-
mony (abst.), 5, 118
CAIRNS, F. A. Determination of phosphorus in pig iron by means
of molybdic acid, P. 1, 167
CALDWELL, G. C. New laboratory stand, 13, 102: Porcelain Gooch
crucible, 13, 105: New form of voltameter, 13, 207: The more
notable events in the progress in agricultural chemistry since

1870, 14, 83: The American chemist (Presidential address), 14, 331
CALDWELL, G. C., and S. W. Parr. De Fecamp's method for de-
termination of fat in milk (abst.), 8, 61
CALM, A. Transformation of α- and β-naphthol into amido-naph-
thalenes (abst.), 4, 270
CAMERON, C. A. Determination of lead as iodate (abst.), - 1, 535
CAMERON, F. K. The benzoyl ester of acethydroxamic acid, 20, (72)
CAMERON, F. K., and H. A. Holly. Acetone-chloroform, - 20, (71)
CAMERON, F. K., and E. F. Thayer. Boiling-point curve for ben-
zene-alcohol solutions, 20, (72)
CAMPBELL, A. See Gomberg, M.
CAMPBELL, E. D. Determination of nickel in nickel steel, 16, 96:
Allowable differences and probable limits of accuracy in analy-
ses, etc., 18, 35: Thermochemical study of iron and steel; a
correction, 20, 78 CAMPBELL, E. D., and W. H. Andrews. Determination of nickel
CAMPBELL, E. D., and W. H. Andrews. Determination of nickel
in nickel-steel, 17, 125 CAMPBELL, E. D., and S. C. Babcock. Further study on the solu-
bility of phosphorus in steel, 19, 786
CAMPBELL, E. D., and E. C. Champion. Electrolytic determination
of tin in tin ores, 20, 687
CAMPBELL, E. D., and W. E. Hartman. Influence of silicon upon
the heat of solution of cast irons, 20, 690
CAMPBELL, E. D., and F. Thompson. Preliminary thermochemical
study of iron and steel, 19, 754
CAMPBELL, H. D. See also Howe, J. L.
CAMPBELL, G. F. See Osborne, T. B.
CANTOR, M. See Benedikt, R.
CAPPELL, E. Spectrum of calcium (absta), 1, 583
CARETTE, H. Oxidation of sebacic acid (abst.), 8, 28, 56, 87: Oxi-
dation of fatty acids (abst.), 8, 184
CARNELLEY, T. Action of heat on mercuric chloride (abst.), 4, 225 CARNELLEY, T., and W. Frew. Corrosion of leaden water pipes
(abst.), 9, 221 CARNELLEY, T., and J. Walker. Dehydration of metallic hydrox-
ides by heat (abst.), 9, 189
CARNOT, A. Volumetric determination of potassium (abst.), 1, 333:
Use of hydrogen sulphide in the dry way (abst.), 1, 489, 536:
Determination of chromium (abst.), 4, 166: Successive separa-
tion of copper, cadmium, and zinc, from nickel and cobalt, etc.
(abst.), 8, 277: Separation of antimony and tin (abst.), 9, 11:
Separation of arsenic, antimony, and tin (abst.), 9, 11: Use of
hydrogen dioxide for the determination of metals of the iron
group (abst.), 10, 192: Separation of lithium as fluoride (abst.), 10, 193
CARO, H. See Graebe, C.
CARPENTER, W. L. On the solidification of fatty oils (abst.), 6, 198
CARR, O. The predominant organic acid in sorghum juice, 15, 144:

Modification of Knorr's extraction apparatus, 16, 868
CASALI, A. Reaction for glycocholic acid; detection of gall in
urine (abst.), 1, 105
CASAMAJOR, P. Amalgamation of iron and of other metals, P. 1, 49:
Estimation of potassium as acid tartrate, P. 1, 98; A new port-
able burette, P. 1, 159: A new mounted burette, P. 1, 181: Cor-
rections due to variations of temperature, P. 1, 188: Areometers,
P. 1, 2, 8, 19: Connection between electricity and the motions of
camphor on water, P. 1, 2, 66: Contributions to blowpipe
chemistry, P. 2, 29, 78, 103; Verification of graduated glass ves-
sels and areometers from 4° to 45°, P. 2, 128: Influence of
temperature on polarization of inverted sugar, 1, 26: Report on
Berzelius medal, 1, 132: Rapid estimation of pure sugar, 1, 205:
Action of bone-black on solutions of pure sugar, 1, 468; De-
tection of starch sugar mechanically mixed with cane-sugar, 2,
111, 428: Note on sulphuretted hydrogen, 3, 30: Detection of
oleomargarine, 3, 83: Detection of starch-sugar syrup mixed
with sugar-house molasses, 3, 87: Table for correction of sac-
charimetric tests by inversion, 3, 89: New filtering apparatus,
3, 125: Analysis of beet root and sorghum cane, 3, 151: Volu-
metric estimation of copper and of lead, 4, 35: Note on asbestos
filters, 4, 248: Detection of anhydrous glucose mixed with refined cane-sugar, 5, 41: Note on camphor motions, 7, 13:
Singular process of sugar analysis, 7, 42: Two new filters and a
new aspirator, 7, 104: Silver iodide as a blowpipe reagent, 7,
132: Platinum filtering bulb for Carmichael's system of filtra-
tion, 8, 17
·
CASTHÉLAZ, J. Fraud in tartar emetics (abst.), 6, 37
CATLIN, C. A. Improved apparatus for volumetric determination
of carbon dioxide and other gases, 15, 614
CAUSSE, H. Action of ethyl aldehyde on resorcinol (abst.), - 9, 34
CAVENTOU, E., and C. Girard. Action of sulphuric acid on cincho-
nine in the presence of oxalic acid (abst.), 10, 83
CAZENEUVE, P. Determination of glucose in blood (abst.), 1, 350:
Oxidation of formic and oxalic acids, etc. (abst.), 1, 490: Cam-
phor dichloride (abst.), 4, 233: Formation of acetylene at the ex-
pense of iodoform (abst.), 6, 37: Isomerism of chloronitrated
camphor (abst.), 6, 131: Detection and determination of fuchsine
in wines (abst.), 7, 294: Examination of wines for fuchsine, etc.
(abst.), 8, 57: Detection of orange and yellow colors in wines
(abst.), 8, 80: Detection of artificial red coloring-matter in
wines (abst.), 8, 81: Camphonitrophenol, isomeric with nitro-
camphor (abst.), 12, 71
CHAMOT, E. M. See Dennis, L. M.
CHAMPION, E. C. See Campbell, E. D.
CHANCE, A. M. Recovery of sulphur from alkali waste (abst.), 10, 90

in wines (abst.), 1, 576: Nitro-acids derived from ketones	
	208
CHANDLER, C. F., and E. Waller. Analysis of mineral waters from	
Texas, II,	141
CHAPER, M. Presence of diamonds in a pegmatite from Hindustan	
(abst.), 6,	105
CHAPIN, E. S. See Noyes, A. A.	
CHAPMAN, E. J. Turner's reaction for boric acid (abst.), - 1,	528
CHAPOTEAUT, P. On the gastric juice (abst.), 4,	242
CHAPPUIS, J. See Hautefeuille, P., and Vincent, C.	
CHASTAING, P. Complex function of morphine; transformation	
into picric acid; solubility (abst.), 4, 76: Researches on pilo-	
	236
CHATARD, T. M. Estimation of alkalies in silicates (abst.), 6,	312
CHATTAWAY, W. See Allen, A. H.	
CHAUTARD, P. Detection of acetone in liquids, etc. (abst.), 8, 24:	
See also Clermont, P. de.	
CHAUVEAU, A. Preparation of attenuated cultivations of anthrax	
virus (abst.), 6, 78: Heating of cultivations of Bacillus anthr	acis
	130
CHESNUT, V. K. Oil-like skin irritant from poison ivy, 18, (81):	
Poisonous honey, 19, (	. /
CHESTAKOFF, W. Substitution product of diallylcarbinol (abst.), 6,	136
CHRISTENSEN, O. T. The chromium and manganese compounds	
corresponding to potassium ferro- and ferricyanide (abst.), 7,	140
CHRISTOMANOS, A. C. Specific gravity of iodine trichloride (abst.),	
1, 90: New apparatus for determination of melting-point	
	226
CHUARD, E. See Brunner, H.	
CHURCH, A. H. Vegetable albinism; respiration and transpiration	
	342
CIAMICIAN, G. L. Effect of pressure and temperature on spectra	
of gases (abst.), 1,	93
CIAMICIAN, G. L., and M. Dennstedt. Action of cyanogen chloride	
on potassium-pyrrol (abst.), 5, 64: Action of acetic anhydride	
	84
CIAMICIAN, G. L. and P. Silber. On the synthesis of pyrocoll	
	161
CIAMICIAN, G. L. See also Weidel, H.	
CLAESSON, P. Normal and acid methyl and ethyl sulphates (abst.),	
1, 492: Sulphates of polyhydric alcohols and carbohydrates (abst.),	- 00
-,	288
CLAISEN, L. Color reaction for phenylglyoxylic acid (abst.), CLAISEN, L., and F. E. Matthews. Action of haloid acids on hy-	543
drocyanic acid (abst.), 4, 221: Combinations of hydrocyanic	
	67
acid with hydrochloric and hydrobromic acids (abst.), - 5, CLAPARÈDE, A., and W. Smith. By-product in the manufacture	0.7
CLAPAREDE, A., and W. Smith Ry-product in the manufacture	

of aurin (abst.), 5, 234
CLARK, E. Method of determining chromium in chrome ore, 17, 327
CLARK, N. D. Crystallization of potassium and cesium ruthenium
nitrosochlorides, 16, 395
CLARKE, F. W. Electrolytic estimation of mercury (abst.), 1, 99:
Fractional analysis of silicates, 13, 277: Constitution of lithia
micas, 15, 245: Reports of the committee on determinations of
atomic weights, 16, 179; 17, 201; 18, 197; 19, 359; 20, 163:
Alkaline reaction of some natural silicates, 20, 739
CLARKE, F. W., and E. A. Schneider. Chemical constitution of
talc (abst.), 12, 351 CLARKE, F. W. See also Beamer, M.
CLARKE, T. See Venable, F. P.
CLASSEN, A. Separation of ferric oxide and alumina from manga-
nese (abst.), 1, 325: Estimation of cobalt, nickel and zinc by
precipitation as oxalates (abst.), 1, 327: Separation of manga-
nese from zinc (abst), 1, 327: New method of quantitative
analysis (abst.), 1, 528: Determination of the atomic weight of
bismuth (abst.), 12, 151
CLASSEN, A., and R. Ludwig. Quantitative analysis by electrolysis
(abst.), 8, 76
CLAUS, A. Synthesis of homologues of aniline, etc. (abst.), 4, 228:
Action of phosphorus pentachloride on acetyl- and benzoyl-
diphenylamine (abst.), 4, 264: Bases resulting from addition
of quinoline and alkyl haloid salts (abst.), 4, 265
CLAUS, A., and M. Dehne. Dichlornaphthalene and chlornaphthol
from β-naphtholsulphonic acid (abst.), 4, 229
CLAUS, A., and E. Istel. Tetrapromoquinoline and diiodoquino-
line (abst.), 5, 24
CLAUS, A., and H. Oehler. Action of phosphorus pentachloride
on $\alpha$ -naphtholsulphonic acid (abst.), 4, 228
CLAUSNIZER, F. Sulphur oxyclorides (abst.), 2, 60
CLAYE, D. Examination of asphaltum (abst.), 4, 196
CLERMONT, P. de. Action of ammonium salts on some metallic
sulphides (abst.), 1, 331, 388
CLERMONT, P. de, and P. Chautard. Oxidation of pyrogallol in
presence of gum arabic (abst.), 4, 237
CLERMONT, P., and J. Frommel. Formation of aurin (abst.), 1,
386: Observations on sulphurous baths (abst.), 1, 389
CLEVE, P. T. Chlorostanuates of rare earths (abst.), I, 278: On
scandium (abst.), 1, 389: Note on didymium (abst.), 4, 240:
Remarks on didymium (abst.), 4, 240: On samarium and its
compounds (abst.), 5, 234
COALE, R. D. See Remsen, I.
COATES, C. E., and W. R. Dodson. Nitrogen assimilation in the
Cochin, D. Non-existence of soluble alcoholic ferment (abst.), 1, 403

COCHRAN, C. B. Study of comparative composition of milk, skim
milk and whey, 15, 347: Detection of foreign fats in lard and
butter, 19, 796 CODA, D. Estimation of zinc in its ores (abst.), 12, 502
COLLIER, P. Analysis of a mineral resembling thorite, 2, 73; De-
velopment of sugar in the sorghums, 2, 75
COLLIN, A. See Nölting, E.
COLORIANO, [M]. Analysis of staurotide (abst.), 7, 294: Con-
ditions of formation of two arseniates of nickel and on their
constitution (abst.), 8, 49: A basic copper arseniate (abst.), 8,
164: Researches on a few crystallized arseniates (abst.), - 8, 165
Colson, A. Determination of sulphur in natural sulphides
(abst.), 1, 487, 540: Reversion of phosphates soluble in citric
acid (abst.), 2, 133: Manufacture of phosphoric acid (abst.),
2, 434: New compounds of carbon and silicon (abst.), 4, 237:
Action of carbon disulphide on silicon (abst.), 4, 240: Some
connections between chemistry and physics (abst.), 8, 178:
Derivatives of hexamethylbenzene and of durene (abst.), 8,
182: A base derived from diquinoline (abst.), 10, 190
Colson, A., and H. Gautier. Some derivatives of xylene (abst.), 8, 96
Colson, A. See also Schützenberger, P.
COMBES, A. On the compound NH <sub>2</sub> (abst.), 4, 240: Action of
chlorinated aldehydes on benzene (abst.), 6, 165: Derivatives
of acetylacetone (abst.), 9, 171: New reaction of aluminum
chloride (abst.), 9, 172: Homologues of acetylacetone, etc.
(abst.), 10, 14
(abst.), 10, 14 Comey, A. M. Ethanediquinolylene (abst.), 12, 232
Сомsтоск, W. J. Analysis of tetrahedrite from Peru (abst.), 1, 393
CONE, E. F. Estimation of pyrrhotite in pyrites ores, - 18, 404
CONINCK. See Oechsner de Coninck.
CONRAD, E. C. See Griffiths, A. B.
CONRAD, M., and M. Guthzeit. Chloromalonic acid and deriva-
tives (abst.), 4, 270
tives (abst.), 4, 270 Соок, А. D. Method of preparing a strictly neutral ammonium
tives (abst.), 4, 270
tives (abst.), 4, 270 Cook, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585 Cooper, W. J. See Wanklyn, J. A.
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sul-
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sulphate with water (abst.), 1, 395
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sulphate with water (abst.), 1, 395  CORNWALL, H. B. Kerosene oil, P. 1, 71: Analysis of potable
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sulphate with water (abst.), 1, 395  CORNWALL, H. B. Kerosene oil, P. 1, 71: Analysis of potable
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sulphate with water (abst.), 1, 395  CORNWALL, H. B. Kerosene oil, P. 1, 71: Analysis of potable waters, P. 1, 201: Methods of butter analysis (abst.), - 8, 28  COSSA, A. Serpentine of Venayes (Vallée d'Aoste) (abst.), - 1, 275
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sulphate with water (abst.), 1, 395  CORNWALL, H. B. Kerosene oil, P. 1, 71: Analysis of potable waters, P. 1, 201: Methods of butter analysis (abst.), - 8, 28  COSSA, A. Serpentine of Venayes (Vallée d'Aoste) (abst.), - 1, 275  COWPER, R. Solubility of glass in certain reagents (abst.), 4, 219:
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sulphate with water (abst.), 1, 395  CORNWALL, H. B. Kerosene oil, P. 1, 71: Analysis of potable waters, P. 1, 201: Methods of butter analysis (abst.), - 8, 28  COSSA, A. Serpentine of Venayes (Vallée d'Aoste) (abst.), - 1, 275  COWPER, R. Solubility of glass in certain reagents (abst.), 4, 219: Analysis of oxidized iron from condenser (abst.), 4, 219:
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sulphate with water (abst.), 1, 395  CORNWALL, H. B. Kerosene oil, P. 1, 71: Analysis of potable waters, P. 1, 201: Methods of butter analysis (abst.), - 8, 28  COSSA, A. Serpentine of Venayes (Vallée d'Aoste) (abst.), - 1, 275  COWPER, R. Solubility of glass in certain reagents (abst.), 4, 219: Analysis of oxidized iron from condenser (abst.), 4, 219: Action of chlorine on certain metals (abst.), 5, 99
tives (abst.),
tives (abst.), 4, 270  COOK, A. D. Method of preparing a strictly neutral ammonium citrate solution, 20, 585  COOPER, W. J. See Wanklyn, J. A.  COPPET, L. C. de. Heat evolved on mixing anhydrous sodium sulphate with water (abst.), 1, 395  CORNWALL, H. B. Kerosene oil, P. 1, 71: Analysis of potable waters, P. 1, 201: Methods of butter analysis (abst.), - 8, 28  COSSA, A. Serpentine of Venayes (Vallée d'Aoste) (abst.), - 1, 275  COWPER, R. Solubility of glass in certain reagents (abst.), 4, 219: Analysis of oxidized iron from condenser (abst.), 4, 219: Action of chlorine on certain metals (abst.), 5, 99

CRAFTS, J. M. See Ador, E., and Friedel, C.
CRAMPTON, C. A. Glucose in butter, 20, 201
CRAVER, H. W. See Noyes, W. A.
CRAWLEY, J. T. Spontaneous combustion of molasses, 19, 538
CRESSNER. See Kressner.
CROBAUGH, F. L. Estimation of graphite in pig metal, - 16, 104
CROOK, W. G. Method of distinguishing butter from other fats
(abst.), 1,568
CROOKES, W., W. Odling, and C. M. Tidy. Colorimeter for water
analysis (abst.), 4, 163
CROSS, C. F., and E. J. Bevan. Chemistry of bast fibers (abst.),
4, 169: Apparatus for determination of melting-points (abst.),
4, 169: On lignification (abst.), 5, 91: Oxidation of cellulose
(abst.), 5, 92: On the oxidation of cellulose with special
reference to bleaching and dyeing (abst.), 6, 197: Combustion
of carbohydrates by means of chromic acid (abst.), - 7, 293
CROSS, C. F., E. J. Bevan and C. Beadle. Furfural-yielding con-
stituents of plants, 17, 286: The natural oxycelluloses, 18, 8
Cross, C. F., and A. Higgin. Reaction of chromic anhydride with
sulphuric acid (abst.), 4, 170
Cross, C. F. See also Green, A. G.
CROSSMAN, T. The analysis of malt, 16, 559
CUNDALL, J. T. See Ramsay, W., and Shenstone, W. A.
Curtius, T. On hydrazoic acid (azoimide) (abst.), - 12, 473
CURTIUS, T., and R. Jay. Hydrazine from aldehyde-ammonia
(abst.), 12, 165
CURTMAN, C. O. Detection of salicylic acid (abst.), 9, 15: Detection
of aniline colors in wines, etc. (abst.), 9, 201: On some of the
arsenic tests of the U. S. Pharmacopoeia (1890), 16, 580: On
the hydration of calcium bromide and iodide, 16, 621: On the
quality of potassium iodide sold in the market as U. S. P., 16, 678
CUSHMAN, A. S., and J. Hayes-Campbell. Volumetric determina-
tion of lead, 17, 901
CUSHMAN, B. S. See Dennis, L. M.
CZUMPELITZ. Color reactions of alkaloids (abst.), 4, 193 DAFERT, F. W. See Beutell, A.
DAHL, T. A new metal (norwegium) (abst.), 1, 398: Atomic weight
of norwegium (abst.), 1, 527
DAHM, G. Determination of alcohol in wine (abst.), - 1, 572  DALCHÉ and Villejean. On the toxic character of bismuth (abst.), 10, 77
DALE, R. S., and C. Schorlemmer. Aurin (abst.), 2, 51: Phenolates
of amido bases (abst.), 5, 100
DALES, B. Electrolytic determination of cadmium, 19, (26): See also
Avery, S.  Day Sur C. Active principle of insect powder (abst.)
DAL SIE, G. Active principle of insect powder (abst.), 1, 390
DAMM, G., and L. Schreiner. Resorcinol dyestuffs (abst.), - 4, 268
DANA, E. S. See Brush, G. J.

DANILEWSKI, A. Studies of albuminoids (abst.), 6, 95 DANNENBERG, E. Determination of colchicine (abst.), - 1, 106
DANNENBERG, E. Determination of colchicine (abst.), - 1, 106
DARTON, N. H. Modification of Mohr's burette, 3, 124: Estimation
of tannic acid in tanning materials, 4, 4: Convenient form of
weighing flask to deliver as a burette, 4, 6: Comparative values of
several methods of determining tannic acid, 4, 49, 62: Ammonia
process for water analysis 5, 104 DAVENPORT, B. F. Rapid filtration (abst.), 6, 49
DAVID, J. Separation of oleic acid from stearic acid (abst.), 1, 360:
Determination of glycerol in fats (abst.), 4, 239
DAVID, R. See Prunier, L.
DAVIDOFF, Ol.GA. Correspondence from Russian Chemical Society
(abst.), 6, 77, 95, 128, 135, 157, 167
DAVIS, G. E. Hydrogen dioxide as a reagent in chemical analysis
(abst.), 1, 335: Determination of sulphide, sulphite and thiosul-
phate in a solution (abst.), 4, 160: Determination of free and com-
bined chlorine in gases escaping from chemical works (abst.),
4, 161: The distillation of coal and recovery of hydrocarbons from
the gas (abst.), 6, 27
DAVIS, G. W. See Smith, W.
DAVOLL, D. L., JR. Fallacies of post-mortem tests for morphine - 16, 799
DAVY, E. W. Reagent for phenol (abst.), 1, 339; Test for nitrites in
water (abst.), 4, 163
DAY, T. C. Estimation of nitrites, alone or in the presence of nitrates
and chlorides (abst.), 10, 85
DAY, W. C., and A. P. Bryant. Note on Pemberton's method of phos-
phoric acid determination as compared, etc., - 16, 282
DEBENNEVILLE, J. S. Laboratory notes, 16, 65: Experiments on
the analysis of pig copper, brasses, and bronzes, 16, 133: Experi-
ments on a ferrotungsten, 16, 297: Some alloys of iron with
molybdenum, tungsten, and chromium, as solutions, 16, 735: Car-
bides of iron with chromium, molybdenum and tungsten, 17, 791:
Note on the separation of silicic and tungstic acids, - 19, 377
DEBRAY, H. Reactions of mercuric chloride (abst.), 4, 238: See also
Deville, H. SC.
DE CHALMOT, G. Are pentoses formed by the assimilation process?
15, 618: Silicides of iron, 17, 923: See also Morehead, J. T.
DECHAN, M. On soaps (abst.), 8, 43
DECHAN, M., and T. Maben. Formation of basic salts in the saponifi-
cation of fats and oils (abst.), 8, 41
DEERING, W. H. See Abel, Sir F.  DEFREN, G. Determination of reducing sugars in terms of cupric
oxide, 18, 749: See also Rolfe, G. W.
DEGENER, P. Volumetric estimation of phenol (abst.), 1, 581: Action
of fused alkalies on aromatic sulphonic acids (abst.), - 2, 294
DEHÉRAIN, P. P., and L. Maquenne. Reduction of nitrates in soils
(abst.), 5, 117, 118, 119

Dehne, M. See Claus, A.
DEICHMÜLLER, A., F. Szymanski, and B. Tollens. β-Hydroxybutyric
acid in diabetic urine (abst.), 7, 177
DEKONINCK, L. L. Test for chlorides in presence of bromides and
iodides (abst.), 7, 209: Determination of carbon in iron (abst.),
10, 155: New hydrogen sulphide generator specially adapted for
use in analytical laboratories, 16, 63
DE KONINCK, L. L., and A. Lecrenier. Separation of gold and plat-
inum from arsenic, antimony, and tin (abst.), 10, 156
DEKONINGH, L. Separation of solid and liquid fatty acids, 17, 740: Estimation of boric acid in foods, 19, 55: Note on the volatility
of boric acid; separation of boric from phosphoric acid; estima-
tion of boric acid in foods, 19, 385: Estimation of mineral matter
in rubber goods, 19, 952: See also Muter, J.
DELACHANAL, B., and A. Mermet. Determination of sulphur in or-
ganic compounds; a claim of priority (abst.), - 1, 487, 542
DELACHANAL, B. See Vincent, C.
DELACRE, M. Some chlorinated derivatives of ethyl acetate (abst.), 10, 17
DELAFONTAINE, M., and C. E. Linebarger. Reaction between carbon
tetrachloride and the oxides of niobium and tantalum, 18, 532
DELAIRE, G., and F. Tiemann. Iridin, the glucoside of the iris
root, 15, 351, 400 : 16, 847
DELVAUX, G. Separation of nickel from cobalt (abst.), - 4, 166
DEMARÇAY, E. Citric acid and its homologues (abst.), 1, 173: Prep-
aration of acetonitrile (abst.), 2, 432: Vaporization of metals
in vacuo (abst.), 4, 242: Color-reaction of rhodium (abst.), 8, 58:
See also Cahours, A.
DEMEL, W. Note on bodies combustible with difficulty (abst.),
4, 269: The dopplerite of Aussee (abst.), 5, 63
DEMOLE, E. Partial synthesis of sugar of milk, and contributions to the synthesis of cane-sugar (abst.), 2, 89: Constitution of dibrom-
ethylene (abst.), 2, 90
DEMSKI, H. See Morawski, T.
DEMUTH, R., and V. Meyer. Action of oxygen on zinc-ethyl (abst.),
12, 156: Guinochet's isomeric carballylic acid (abst.), 12, 166:
Determination of vapor densities below the boiling-point (abst.), 12, 168
DENIGES, G. Distinction of phosphorus oxychloride from trichloride
(abst.), 12, 70
DENNIS, L. M. Gerhard Krüss (obituary), 17, 423: Separation of
thorium from the other rare earths by means of potassium trini-
tride, 18, 947: New form of discharger for spark spectra of solutions, 20,
DENNIS, L. M., C. H. Benedict, and A. C. Gill. Salts of hydronitric
acid, 20, 225
DENNIS, L. M., and E. M. Chamot. Contributions to the chemistry
of didymium, 19, 799
DENNIS, L. M., and B. S. Cushman. On the analytical properties of iron phosphide and phosphate, 16, 477
iron phosphide and phosphate, 16, 477

DENNIS, L. M., Martha Doan, and A. C. Gill. New compounds of
thallium, 18, 970
DENNIS, L. M., and C. G. Edgar. Comparison of various rapid
methods for determining carbon dioxide and carbon monoxide, 19, 859
DENNIS, I. M., and W. H. Magee. Contributions to the chemistry
of cerium, 16, 649
DENNIS, L. M., and A. E. Spencer. Zirconium tetraiodide, - 18, 673
Dennstedt, M. Derivatives of p-bromaniline (abst.), 2, 224:
Crystallographic description of benzyl-o-thioformate (abst.),
2, 224 : See also Ciamician, G. L.
DENZEL, J. Chlorobromine and bromine substitution products of
ethylene (abst.), 1, 248: Nomenclature and boiling-points of
chlorobromine and bromine substitution products of ethane and
ethylene (abst.), 1, 248
Déon, P. H. See Horsin-Déon, P.
DE ROODE, R. Determination of phosphoric acid by the molybdic
acid process, 17, 43: Addition of calcium chloride in the deter-
mination of potash, 17, 46: Preparation of ammonium citrate solu-
tion, 17, 47: Determination of potash in kainite, 17, 85: Oxida-
tion of organic matter and decomposition of ammonium salts by
aqua regia in determination of potash, 17, 86 DERVIN, E. On the sulphides of phosphorus (abst.), - 6, 189
Descamps, A. Preparation and properties of potassium cobaltocyanide and its derivatives (abst.), 1, 272
cyanide and its derivatives (abst.), 1, 272  DE SCHWEINITZ, E. A. Some cotton-seed analyses, 6, 216: Impor-
tance of the study of biochemistry, 16, 261: Convenient lamp for
generating formaldehyde gas and acetic aldehyde, 19, (11): Min-
eral constituents of tubercle bacilli, 20, 618, (66): Convenient
dropping bottle, 20, (4): Pasteur milk laboratory at Washington, 20, (48)
DE SCHWEINITZ, E. A., and M. Dorset. Composition of the tuber-
culosis and glanders bacilli, 17, 605: Fats contained in the tuber-
culosis bacilli, 18, 449 : Some products of the tuberculosis bacil-
lus, 19, 782
DE SCHWEINITZ, E. A., and J. A. Emery. Use of the calorimeter in
detecting adulterations of butter and lard, 18, 174: See also
Schweinitz, E. A. von.
DESHAYES, V. Eggertz's method of determining carbon in iron and
steel (abst.), 1, 271, 371: Chemical composition and mechanical
properties of steel (abst.), 1,278  DESI, E. D. Oxides of tungsten, 19,213
Deutsch, A. Ethers of tribasic formic acid (abst.), 1, 167: See also
Gabriel, S.
DEVILLE, H. SC., and H. Debray. Explosive alloys of zinc with
platinum metals (abst.), 4, 240
DEWAR, J. Manufacture of chlorine from magnesium chloride (abst.), 9, 224
DEWEY, F. P. Separation of tin from arsenic and antimony (abst.),
1 482 · Accuracy of the commercial assay for silver, 16, 505 : Sul-

phuric acid process of refining lixiviation sulphides, 18, 643, (76): The actual accuracy of chemical analysis, - 18, 808, (88)
DICKMANN, F. Water analysis (abst.), 12, 413
DIECK, H. L. See Smith, E. F.
DIEHL, O. C. See Trowbridge, P. F.
DIETERICH, E. Solubility of opium alkaloids (abst.), 9, 216
DIETZELL, B. E. Evolution of free nitrogen in fermentation (abst.), 4, 267
DIETZELL, B. E., and M. G. Kressner. Determination of phosphoric
acid in fish guano (abst.), 1,355
DIRVELL, P. J. Separation of gold and platinum from antimony,
arsenic, and tin (abst.), 8, 278
DITTE, A. Action of acid solutions on stannous oxide (abst.), 4, 234:
Action of alkaline solutions on stannous oxide (abst.), 4, 235:
Action of potassium hydroxide on lead oxide (abst.), 4, 237:
Decomposition of lead salts by alkalies (abst.), 4, 237:
Combinations of disulphide and diselenide of tin (abst.), 5, 117:
Production of crystallized uranates (abst.), 5, 120: Combination
of silver nitrate with alkaline nitrates (abst.), 8, 50: Carbonate of
aniline (abst.), 10, 114
DITTMAR, W. Disintegration of chrome iron ore (abst.), 1, 104
DIVERS, E. Theory of the constitution of the fulminates (abst.),
6, 45: Origin of calcium thiosulphate (abst.), - 7, 28
DIVERS, E., and M. Kawakita. On the constitution of the fulminates
(abst.), 6, 45: On Liebig's production of fulminating silver with-
out the use of nitric acid (abst.), 6, 46: On hyponitrites (abst.), 6,
75: Decomposition of silver fulminate by hydrochloric acid (abst.), 6, 90
DIVERS, E., and T. Shimidzu. Magnesium hydrosulphide and its use
as a source of hydrogen sulphide (abst.), 6, 311: Use of sulphuric
acid in place of nitric acid to oxidize sulphides, etc. (abst.), - 7, 211
DIVERS, E., and M. Shimosé. New oxide of tellurium (abst.), 5, 115:
Tellurium sulphoxide (abst.), 5, 116: New reaction of tellurium
compounds (abst.), 5, 116
DIXON, H. B., and H. W. Smith. Incompleteness of combustion in
gaseous explosions (abst.), 10, 179
Doan, Martha. See Dennis, L. M.
DOBBIN, L. Estimation of caustic alkali in the presence of alkaline
carbonates (abst.), 10, 181
Dodson, W. R. See Coates, C. E.
DOESNER, O. Combinations of benzotrichloride with aromatic bases
(abst.), 4, 207
DOELTER, C. Method of determining ferrous oxide in silicates (abst.), 1, 85
Dogiel, J. Chemical theory of effects of arsenic (abst.), 4, 268
DOHME, A. R. L., and H. Engelhardt. Chemistry of Cascara sagrada, 20, 534
DOOLITTLE, O. S. Torsion viscosimeter, 15, 173: Standardizing the
torsion viscosimeter, 15, 454
DOOLITTLE, O. S., and A. Eavenson. Notes and queries on Dudley's
method of determining phosphorus in steel 16, 234

Donath, E. Method of detecting monochromates and free chromic acid in bichromates (abst.), 1, 89; Tarry ingredients in commercial ammonia (abst.),	DONALD, G. See Mills, E. J.
cial ammonia (abst.),  Donath, E., and F. Müllner. Separation of stannic oxide from tungstic oxide (abst.),  P. 1, 227: Abnormal constituents of the blood due to leucocythemia, P. 1, 227: Abnormal constituents of the blood due to leucocythemia, P. 1, 2, 29: Wilkinson's process for manufacture of illuminating gas from wood, 2, 449: Composition of elephant's milk, 3, 55: 4, 157: A simple apparatus for the rapid estimation of urea, 7, 72: In rebuttal (reply to Dr. Greene's remarks), 7, 168: Preparation of zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods,  DORP, W. A. VAN. See Hoogewerff, S. DORRANCE, J. T. See Noyes, A. A. DORSET, M. See De Schweinitz, E. A. DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.),  PRAJLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.),  PRAPER, J. W. Science in America (presidential address),  P. 1, 135  PRECHISEL, E. Precipitation of calcium carbonate (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminioids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.),  DREWSEN, V. See Baeyer, A.  DROWN, T. M., Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary),  - 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.),  - 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 25: In-  D	DONATH, E. Method of detecting monochromates and free chromic
DONATH, E., and F. Müllner. Separation of stannic oxide from tungstic oxide (abst.),  ORREMUS, C. A. Contributions to the literature of milk analysis,  P. 1, 227: Abnormal constituents of the blood due to leucocythemia,  P. 1, 2, 29: Wilkinson's process for manufacture of illuminating gas from wood, 2, 449: Composition of elephant's milk, 3, 55: 4, 157:  A simple apparatus for the rapid estimation of urea, 7, 72: In rebuttal (reply to Dr. Greene's remarks), 7, 168: Preparation of zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods,  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.),  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.),  Indicate the control of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.),  DRAPER, J. W. Science in America (presidential address),  P. 1, 135  PRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxantline, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.),  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary),	acid in bichromates (abst.), 1, 89: Tarry ingredients in commer-
DONATH, E., and F. Müllner. Separation of stannic oxide from tungstic oxide (abst.),  ORREMUS, C. A. Contributions to the literature of milk analysis,  P. 1, 227: Abnormal constituents of the blood due to leucocythemia,  P. 1, 2, 29: Wilkinson's process for manufacture of illuminating gas from wood, 2, 449: Composition of elephant's milk, 3, 55: 4, 157:  A simple apparatus for the rapid estimation of urea, 7, 72: In rebuttal (reply to Dr. Greene's remarks), 7, 168: Preparation of zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods,  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.),  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.),  Indicate the control of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.),  DRAPER, J. W. Science in America (presidential address),  P. 1, 135  PRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxantline, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.),  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary),	cial ammonia (abst.), 1, 92
tungstic oxide (abst.), 9, 200 Doremus, C. A. Contributions to the literature of milk analysis, P. 1, 227: Abnormal constituents of the blood due to leucocythemia, P. 1, 2, 29: Wilkinson's process for manufacture of illuminating gas from wood, 2, 449: Composition of elephant's milk, 3. 55: 4, 157: A simple apparatus for the rapid estimation of urea, 7, 72: In rebuttal (reply to Dr. Greene's remarks), 7, 168: Preparation of zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antinionial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods, 19, 733  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), 1, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 349: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxantline, a product of decomposi- tion of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Forma- tion of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph. D. (obituary), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 4, 234: Germination in soil	DONATH, E., and F. Müllner. Separation of stannic oxide from
Doremus, C. A. Contributions to the literature of milk analysis, P. 1, 227; Abnormal constituents of the blood due to leucocythemia, P. 1, 2, 29; Wilkinson's process for manufacture of illuminating gas from wood, 2, 449; Composition of elephant's milk, 3, 55; 4, 157; A simple apparatus for the rapid estimation of urea, 7, 72; In rebuttal (reply to Dr. Greene's remarks), 7, 168; Preparation of zirconia, 8, 91; Fluorides as agents for softening hard water, 12, 303; Post-mortem diffusion of arsenic, 13, 283; Purification of boiler feed water, 15, 610; Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667; Presence of oil in boiler scale, 18, 741; Method of collecting and analyzing the gases in canned goods, 19, 733  Dorp, W. A. van. See Hoogewerff, S.  Dorro-Scribani, F. Determination of nitric acid in lime-juice (abst.), 1, 367  Dragendorff, G. Brucine reaction with chromic acid (abst.), 1, 100  Draper, J. W. Science in America (presidential address), - P. 1, 135  Drechbell, E. Precipitation of calcium carbonate (abst.), 1, 334; Preparation of crystalline albumin compounds (abst.), 1, 334; Preparation of crystalline albumin compounds (abst.), 1, 494; Electrolytic experiments (abst.), 2, 135; Carbamidopalladious chloride (abst.), 2, 137; Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224; Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274; Formation of urea from albumin (abst.), 12, 475  Drewsen, V. See Baeyer, A.  Drown, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96; Determination of silicon in pig iron and steel (abst.), 1, 285, 371; Lewis Mills Norton, Ph.D. (obituary), 4, 164  Dubois, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288; - Examination of fatty matters (abst.), 4, 234; Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25; In-	tungstic oxide (abst.), 9, 200
P. 1, 227: Abnormal constituents of the blood due to leucocythemia, P. 1, 2, 29: Wilkinson's process for manufacture of illuminating gas from wood, 2, 449: Composition of elephant's milk, 3. 55: 4, 157: A simple apparatus for the rapid estination of urea, 7, 72: In rebuttal (reply to Dr. Greene's remarks), 7, 168: Preparation of zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods, 19, 733  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chronic acid (abst.), 1, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHBEL, E. Precipitation of calcium carbonate (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: - Examination of fatty matters (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 25: In-  DUBOIS, M. W. See Mixer, C. T.	
P. 1, 2, 29: Wilkinson's process for manufacture of illuminating gas from wood, 2, 449: Composition of elephant's milk, 3, 55: 4, 157: A simple apparatus for the rapid estimation of urea, 7, 72: In rebuttal (reply to Dr. Greene's remarks), 7, 168: Preparation of zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods, 19, 733  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), 1, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alteruating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: - Examination of fatty matters (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
A simple apparatus for the rapid estimation of urea, 7, 72: In rebuttal (reply to Dr. Greene's remarks), 7, 168: Preparation of zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods, 19, 733  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), 1, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), - 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Exammination of fatty matters (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
buttal (reply to Dr. Greene's remarks), 7, 168: Preparation of zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods,  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.),  Cabst.),  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.),  I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.),  DRAPER, J. W. Science in America (presidential address),  PRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.),  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary),  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.),  - 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	from wood, 2, 449: Composition of elephant's milk, 3. 55: 4, 157:
zirconia, 8, 91: Fluorides as agents for softening hard water, 12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods, 19, 733  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), 1, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	A simple apparatus for the rapid estimation of urea, 7, 72: In re-
12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods,  DORP, W. A. VAN. See Hoogewerff, S.  DORANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.),  1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.),  I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.),  7, 60  DRAPER, J. W. Science in America (presidential address),  P. I, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), I, 334:  Preparation of crystalline albumin compounds (abst.), I, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.),  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), I, 96:  Determination of silicon in pig iron and steel (abst.), I, 285, 371:  Lewis Mills Norton, Ph.D. (obituary),  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.),  (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.),  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	buttal (reply to Dr. Greene's remarks), 7, 168: Preparation of
boiler feed water, 15, 610: Chemical history of a case of combined antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods, 19, 733  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. I, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	· zirconia, 8, 91: Fluorides as agents for softening hard water,
antimonial and arsenical poisoning, 17, 667: Presence of oil in boiler scale, 18, 741: Method of collecting and analyzing the gases in canued goods, 19, 733  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. I, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), I, 334: Preparation of crystalline albumin compounds (abst.), I, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 4, 164  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	12, 303: Post-mortem diffusion of arsenic, 13, 283: Purification of
boiler scale, 18, 741: Method of collecting and analyzing the gases in canned goods, 19, 733  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. I, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), I, 334: Preparation of crystalline albumin compounds (abst.), I, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	boiler feed water, 15, 610: Chemical history of a case of combined
in canned goods,  DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.),  (abst.),  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.),  I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.),  DRAPER, J. W. Science in America (presidential address),  P. I, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), I, 334:  Preparation of crystalline albumin compounds (abst.), I, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.),  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), I, 96:  Determination of silicon in pig iron and steel (abst.), I, 285, 371:  Lewis Mills Norton, Ph.D. (obituary),  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.),  (abst.),  4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.),  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	antimonial and arsenical poisoning, 17, 667: Presence of oil in
DORP, W. A. VAN. See Hoogewerff, S.  DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chronic acid (abst.), I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. I, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: - Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	boiler scale, 18, 741: Method of collecting and analyzing the gases
DORRANCE, J. T. See Noyes, A. A.  DORSET, M. See De Schweinitz, E. A.  DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1, 367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. I, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), I, 334: Preparation of crystalline albumin compounds (abst.), I, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	in canned goods, 19, 733
Dorset, M. See De Schweinitz, E. A.  Dotto-Scribani, F. Determination of nitric acid in lime-juice (abst.), 1,367  Dragendorff, G. Brucine reaction with chromic acid (abst.), 1, 100  Dralle, C. Oxidation of purpurin (abst.), 7,59: On haematoxylin and brasilin (abst.), 7,60  Draper, J. W. Science in America (presidential address), - P. 1, 135  Drechsel, E. Precipitation of calcium carbonate (abst.), 1, 334: Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  Drewsen, V. See Baeyer, A.  Drown, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  Drown, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  Dubois, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 8, 83  Dubois, H. W. See Mixer, C. T.  Duclaux, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	DORP, W. A. VAN. See Hoogewerff, S.
DOTTO-SCRIBANI, F. Determination of nitric acid in lime-juice (abst.), 1,367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), I, 100  DRALLE, C. Oxidation of purpurin (abst.), 7,59: On haematoxylin and brasilin (abst.), 7,60  DRAPER, J. W. Science in America (presidential address), - P. I, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), I, 334:  Preparation of crystalline albumin compounds (abst.), I, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), I, 96:  Determination of silicon in pig iron and steel (abst.), I, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	DORRANCE, J. T. See Noyes, A. A.
(abst.), 1,367  DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), 1, 100  DRALLE, C. Oxidation of purpurin (abst.), 7,59: On haematoxylin and brasilin (abst.), 7,60  DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
DRAGENDORFF, G. Brucine reaction with chromic acid (abst.), I, 100 DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60 DRAPER, J. W. Science in America (presidential address), - P. I, 135 DRECHSEL, E. Precipitation of calcium carbonate (abst.), I, 334: Preparation of crystalline albumin compounds (abst.), I, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475 DREWSEN, V. See Baeyer, A. DROWN, T. M. Pulverized zinc for reduction of iron (abst.), I, 96: Determination of silicon in pig iron and steel (abst.), I, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241 DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164 DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 8, 83 DUBOIS, H. W. See Mixer, C. T. DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	DOTTO-SCRIBANI, F. Determination of uitric acid in lime-juice
DRALLE, C. Oxidation of purpurin (abst.), 7, 59: On haematoxylin and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	101
and brasilin (abst.), 7, 60  DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
DRAPER, J. W. Science in America (presidential address), - P. 1, 135  DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494:  Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
DRECHSEL, E. Precipitation of calcium carbonate (abst.), 1, 334:  Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475 DREWSEN, V. See Baeyer, A. DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241 DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164 DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 8, 83 DUBOIS, H. W. See Mixer, C. T. DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
Preparation of crystalline albumin compounds (abst.), 1, 494: Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475 DREWSEN, V. See Baeyer, A. DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96: Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241 DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164 DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288: Examination of fatty matters (abst.), 8, 83 DUBOIS, H. W. See Mixer, C. T. DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
Electrolytic experiments (abst.), 2, 135: Carbamidopalladious chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
chloride (abst.), 2, 137: Hypoxanthine, a product of decomposition of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
tion of certain albuminoids (abst.), 2, 224: Electrolysis of normal caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
caproic acid with the alternating current (abst.), 8, 274: Formation of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
tion of urea from albumin (abst.), 12, 475  DREWSEN, V. See Baeyer, A.  DROWN, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores  (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil  rich in organic matters, but free from microbes (abst.), 7, 25: In-	
Drewsen, V. See Baeyer, A.  Drown, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  Drown, T. M., and P. W. Shimer. Analysis of titaniferous iron ores  (abst.), 4, 164  Dubois, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  Dubois, H. W. See Mixer, C. T.  Duclaux, E. Gastric digestion (abst.), 4, 234: Germination in soil  rich in organic matters, but free from microbes (abst.), 7, 25: In-	
Drown, T. M. Pulverized zinc for reduction of iron (abst.), 1, 96:  Determination of silicon in pig iron and steel (abst.), 1, 285, 371:  Lewis Mills Norton, Ph.D. (obituary), 15, 241  Drown, T. M., and P. W. Shimer. Analysis of titaniferous iron ores  (abst.), 4, 164  Dubois, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  Dubois, H. W. See Mixer, C. T.  Duclaux, E. Gastric digestion (abst.), 4, 234: Germination in soil  rich in organic matters, but free from microbes (abst.), 7, 25: In-	
Determination of silicon in pig iron and steel (abst.), 1, 285, 371: Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
Lewis Mills Norton, Ph.D. (obituary), 15, 241  DROWN, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
Drown, T. M., and P. W. Shimer. Analysis of titaniferous iron ores (abst.), 4, 164  Dubois, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  Dubois, H. W. See Mixer, C. T.  Duclaux, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
(abst.), 4, 164  DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
DUBOIS, C., and L. Padé. Studies on fatty bodies (abst.), 7, 288:  Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	·
Examination of fatty matters (abst.), 8, 83  DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
DUBOIS, H. W. See Mixer, C. T.  DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
DUCLAUX, E. Gastric digestion (abst.), 4, 234: Germination in soil rich in organic matters, but free from microbes (abst.), 7, 25: In-	
rich in organic matters, but free from microbes (abst.), 7, 25: In-	
fluence of sunlight on vitality of germs of microbes (abst.) 7, 77	fluence of sunlight on vitality of germs of microbes (abst.), 7, 77:
Studies on butter (abst.), 8, 107: Rancidity of butter (abst.), - 8, 108	

DUDLEY, C. B. Circular to iron and steel chemists on method of
determining phosphorus, 16, 286: Some present possibilities in the
analysis of iron and steel (presidential address), 19, 93: The dig-
nity of analytical work (presidental address), 20, 81
DUDLEY, C. B., and F. N. Pease. Standard methods for analysis of
iron and steel, 15, 501: An attempt to find the amount of phos-
phorus in three samples of steel, 16, 217: Some points in the
determination of phosphorus in steel by the volumetric method, 16, 224
DUDLEY, C. B. See also Noyes, W. A.
DUDLEY, W. L. Action of gaseous hydrochloric acid and oxygen on
platinum metals, 15, 272: Electro-deposition of iridium, method
of maintaining the uniform composition of an electroplating bath,
15, 274: Opening of the Kent Chemical Laboratory of the Univer-
sity of Chicago, 16, 213: Relationship of heat of vaporization of
gases to their density and also to their boiling-point, 17, 969: Nick-
elo-nickelic hydrate, 18, 901: A new volatile alkaloid, 1, 286
DÜRKOPF, E., and H. Göttsch. A new lutidine (abst.) 12, 233
Duggan, J. R. Determination of urea in urine (abst.), - 4, 196
Duisberg, C. Formation of p-toluyl-p-methylimisatin from dichlor-
acetic acid and p-toluidine (abst.), 7, 205
Dulin, R. S. Wet assay of copper, 17, 346
DUMAS, J. B. Presence of oxygen in metallic silver (abst.), 1, 527:
Normal carbon dioxide in the atmosphere (abst.), 4, 232
DUMREICHER, O. VON. Action of aluminum chloride on monobrom-
benzene (abst.), 4, 174
DUNHAM, E. K. Value of a bacteriological examination of water, 19, 591
DUNNINGTON, F. P. Determination of sulphur in coal, P. 1, 97:
Analysis of aragonite containing lead, P. 2, 14: Determination of
copper, P. 2, 140: Manganese in the aslı of wheat, P. 2, 141:
Analyses of ashes of certain weeds, 2, 24: Metatitanic acid and the
estimation of titanium by hydrogen dioxide, 13, 210: Improved
gas regulator, 17, 781: Collector for distillation of ammonia from
water, 20, 286
DUPETIT, G. See Gayon, U.
DUPRÉ, A. Relations between amounts of silica and alumina in pure
wheat (abst.), 1, 110: Detection of foreign coloring-matters in
wine (abst.), 1, 577: Examination of potable waters (abst.), - 4, 162
Dupré, A., and H. W. Hake. Gravimetric determination of minute
quantities of carbon (abst.), 1, 108
DUVILLIER, E. Recovery of platinum from residues (abst.), 1, 587:
Compounds of the creatinine group (abst.), 4, 273
DUVILLIER, E., and A. Buisine. Commercial trimethylamine (abst.), 1, 398
Dyson, S. Brominated carbon compounds obtained in the manufac-
ture of bromine (abst.), 5, 93: See also Thorpe, T. E.
EAVENSON, A. See Doolittle, O. S.
Eddy, H. P. Sewage disposal at Worcester, Mass., - 16, 682

EDER, J. M. Characteristic of Chinese tea, and detection of adultera-
tions (abst.), 1, 362: Behavior of glue and carbohydrates with
chromates (abst.), 1, 493: Chemical composition of pyroxylin and
the formula of cellulose (abst.), 2, 173: New chemical photometer
(abst.), 2, 173
EDGAR, C. G. See Dennis, L. M.
EDLER, E. Nitropseudocumene, pseudocumidine, and pseudocumenol,
holding the position 1:3:4:5 (abst.), 7, 249
Effront, J. Isomeric isobutyl-o-amidotoluenes (abst.), 7, 88:
Method for the determination of starch and different kinds of
sugars (abst.), 9, 36
EGLI, K. Products of the dry distillation of ammonium benzene-
sulphonate (abst.), 7, 231
EHRENBERG, A. On mercury fulminate (abst.), 7, 122: Sodium ful-
minate (abst.), 7, 201: Fulminuric acid (abst.), 7, 248: Chlor- and
brom- fulminuric acid (abst.), 7, 248
EHRENFELD, C. H. Mineral group from York, Pa., 15, 543: Chem-
ical behavior of tungsten and molybdenum, and their trioxides, 17, 381
EHRHARDT, R. See Gattermann, L.
EHRLICH, I. On gallium (abst.), 7, 77
EICHBAUM, F. Preparation of soap (abst.), 8, 206
EILOART, A. Some reactions of carbon dioxide, carbon disulphide,
and sulphur dioxide (abst.), 7, 286: Absorbents for carbon disul-
phide vapor (abst.), 7, 286: The calorimetric bomb as a combus-
tion furnace for ultimate analysis (abst.), 10, 172: Index to litera-
ture of stereochemistry, 14, 241: Note on the stereochemistry of
creatinines, 14, 284
EINHORN, A. Preparation of o-nitrobenzaldehyde (abst.), 6, 87: The
force function in crystals (abst.), 7, 199: Synthesis of alcohol-
acids of the pyridine series (abst.), 12, 160
EINHORN, A., and A. Marquardt. Dextro-cocaine (abst.), - 12, 164
EKSTRAND, A. E. Mononitro-a-naphthoic acid (abst.), - 7, 147
ELIASBERG, S. Separation of zinc and cadmium by electrolysis
(abst.), 7, 296
ELLIOTT, A. H. Table of values of sulphuric acid, P. 2, 26: Appara-
tus for rapid analysis of mixture of gases, 3, 91: Nitro-saccharose,
4, 147: Nitrosaccharose: a correction, 4, 186
ELLIOTT, A. H., and F. Sands. Notes on bone oil, 4, 153
ELLMS, J. W. See Richards, Ellen H.
ELSBACH, L. Compounds of naphthoquinone with toluidine and
ethylaniline (abst.), 5, 19
ELTZBACHER, F. See Anschütz, R.
EMERY, J. A. See De Schweinitz, E. A.
EMMENS, S. H. Some new nickel minerals, 14, 205: Constitution of
ELLIS, J. On Maumené's test for oils (abst.), 8, 108  ELLIS, W. H. Official milk analysis in Canada 14, 262
ELLIS, W. II. Official milk analysis in Canada 14, 303

EMMERLING, O. Metallic phosphides (abst.),	1, 168
ENDEMANN, H. Determination of the relative effectiveness of disin-	
fectants, P. 1, 24: Bismuth in lead in the manufacture of white	
lead, P. 1, 70: Alcohol in statu nascendi, P. 1, 173: Note on	
density of chlorine at high temperatures, 1, 310: Review of latest	
investigations on dissociation of elements, 1, 313: Boracic acid as a	
preservative, 1, 477: On the constitution of ultramarine, 2, 381: On	
some quinoline substitution products, 7, 222: Formation of am-	
monium thiosulphate in gas generators, 8, 47: Photographic pro-	
cess by means of aniline black, 8, 189: Paul Casamajor (obituary),	
	9, 954
ENDEMANN, H., and G. A. Prochazka. Laboratory notes, 1, 525:	2) 704
Preparation of standard soda solution, 1, 525: Hydrobromic acid	
as a very delicate test for copper, 1, 525: Examination of sweet	
	1, 526
ENDEMANN, H. See also Prochazka, G. A.	1, 520
ENGEL, R. Solution of magnesium carbonate in carbonic acid water	
'abst.), 7, 114: Solubility of copper sulphate in presence of am-	
monium sulphate (abst.), 8, 34: Influence of acid ammonium	
oxalate on the solubility of neutral oxalate (abst.), 8, 71: Rea-	
gent to detect the acid nature of weak acids, etc. (abst.), 8, 79:	
Hydrates of zinc chloride (abst.), 8, 162: Variations of solubility	
of some chlorides in presence of hydrochloric acid (abst.), 8, 163:	
Combinations of zinc chloride with hydrochloric acid (abst.),	
8, 163: Alcoholate of potassium hydroxide (abst.), 8, 273: An	
organic acid obtained by the action of alcoholic potassium hy-	
droxide on a mixture of chloroform and acetone (abst.), -	
ENGEL, R., and A. de Girard. New method of making acetal (abst.),	2, 432
ENGEL, R., and A. Moitessier. Dissociation of ammonium sulphide	
	1, 402
ENGELHARDT, H. See Dohme, A. R. I.	
ENGLE, W. D. Action of metallic thiocyanates upon chlorhydrins, 2	o, 668
ENGLER, C. Viscosity of lubricating oils (abst.), 7, 93: Artificial pro-	
	5, 379
ENOCH, C. See Tafel, J.	
ERDMANN, H. Phenylisocrotonic acid and nitric acid. Phenyl-	
nitroethylene (abst.), 7, 87: Conversion of naphthylaminesul-	
phonic acids into dichloronaphthalene (abst.), 10, 42: See also	
Volhard, J.	
ERLENMEYER, E. The two isomeric dibromopropanes (abst.), 2, 181:	
Phenyllactic acids (abst.), 2, 366: Phenylbromlactic acid (abst.),	
	5, 69
ERLENMEYER, E., and C. L. Müller. Halogenized and hydroxylized	,
	4, 175
ESCHELLMANN, G. The loss of niter in the manufacture of sulphuric	., -/
	6, 141
ESSNER, J. C. See Oechsner de Coninck, W.	, -4.

ÉTARD, A. Researches upon sulphates (abst.), 1, 278: Isomery of cu-
prous sulphites (abst.), 4, 241: Preparation of hydriodic acid
(abst.), 10, 77: See also Gal, H.
EVANS, F. P., and W. Ramsay. Halogen compounds of selenium
(abst.), 6, 79
EVERHARDT, E. See Leeds, A. R.
EWELL, E. E. Chemistry of the <i>Cactaceae</i> , 18, 624, (83): Condenser
for distillation of liquids having low boiling-points, 19, 398
EWELL, E. E., and H. W. Wiley. Some products of cassava, 15, 78:
Effects of acidity on the development of nitrifying organ-
isms, 18, 475, (82)
EWELL, E. E. See also Wiley, H. W.
EYMONNET, L. See Lepine, R.
EYSTER, G. S. Determination of the rotation of left-handed solu-
tions, 5, 104: New overflow pipette, 5, 218
FABRE, C. See Berthelot, M.
FAHLBAUM. Purification of mineral oil with sulphurous acid (abst.), 8, 206
FAHLBERG, C. On the liquid toluenesulphonchloride (abst.), 1, 287:
See also Remsen, I.
FARRINGTON, E. H. Acidity of milk increased by boracic acid, - 18, 847
FAUCONNIER, A. Determination of urea by the alkaline hypochlo-
rites and hypobromites (abst.), 2, 132: Mannide (abst.), 5, 120:
On the second anhydride of mannitol (abst.), 6, 38
On the second anhydride of mannitol (abst.), 6, 38 FAWSITT, C. A. Action of sulphur chloride on oils (abst.), - 10, 116
FAXON, W. A. See Rolfe, G. W.
FAY, H., and H. P. Talbot. Segregation of carbon in a piece of boiler
plate, 20, 614
FEHRMANN, A. Preparation of lead dioxide (abst.), - 5, 51 FEHRMANN, W. Auramines (abst.), - 9, 212
FEHRMANN, W. Auramines (abst.), 9, 212
FELS, J. Disintegration and solution of chrome iron stone (abst.), 1, 558
FEIT, W. Determination of mercury (abst.), 12, 17: Determination
of thallium (abst.), 12, 17
FENTON, H. J. H. Action of hypochlorites on urea (abst.), I, IOI:
Transformation of urea into cyanamide (abst.), 4, 221
FERGUSON, W. C. Compressed air wash-bottle, 16, 148: Arrangement
for conducting a number of laboratory distillations with steam,
simultaneously, 16 150: Remarks about basic sulphate of alumina, 16, 153
FESER. Optical estimation of fat in milk (abst.), 1,570
FIELD, C., and E. F. Smith. Separation of vanadium from arsenic, 18, 1051
FIELD, W. D. Pyroxylin, its manufacture and applications, 15, 140;
16, 487, 543: Note on the manufacture of the prussiates, - 15, 569
FIELDS, J. Modification of the Gunning method for nitrates, - 18, 1102
FILHOL, E., and Senderens. Arsenates neutral to litmus (abst.), 4, 272
FINKENER, R. Detection of mineral oil in resin oil (abst.), 8, 65:
Elaidin reaction (abst.), 8, 232: Examination of soap powders
(abst.), 8, 233
FINKLER, D. See Pflüger, E.

FIREMAN, P. New mode of formation of tertiary and quaternary
phosphines, 18, (89): Observations on the centric benzene formula
and the aromatic character, 20, (66)
FISCHER, B., and O. Philipp. Dimethylazobenzene as an indicator in
alkalimetry (abst.), 7, 202
FISCHER, EMIL. On caffeine (abst.), 4, 174: Transformation of xan-
thine into theobromine and caffeine (abst.), 4, 264: Note on tri-
acetonealkamine (abst.), 5, 134: On uric acid (abst.), 7, 29: Syn-
thesis of glucose (abst.), 12, 157: Synthesis of mannose and levu-
lose (abst.), 12, 165: Synthesis in the sugar group, - 12, 340, 400, 461
FISCHER, E., and H. Koch. Ethylphthalylacetoacetate (abst.), - 5, 238
FISCHER, E., and H. Kuzel. Quinazole compounds (abst.), - 5, 238
FISCHER, E., and J. Tafel. Synthetical experiments in the sugar
group (abst.), 9, 191
FISCHER, EMIL. See also Penzoldt, F.
FISCHER, EUGEN. New series of dye-stuffs (abst.), 2, 367: Phenan-
threnedisulphonic acid and some of its derivatives (abst.), - 2, 367
FISCHER, F. Examination of butter by polarized light (abst.), 1, 358:
Apparatus for determination of oxygen in the air (abst.), 1, 585:
New form of calorimeter (abst.), 1,586
FISCHER, G. New dye-stuff from o-amidophenol (abst.) - 1, 493
FISCHER, L. A. Facilities for standardizing chemical apparatus
afforded by foreign governments and our own, 20, 912
FISCHER, O. Nicotinic acid from pyridine (abst.), 4, 176: Condensa-
tion products of aromatic bases (abst.), 5, 19
FISCHER, O., and L. German. On the violet derivatives of triphenyl-
methane (abst.), 5, 241
FISCHER, O., and G. Körner. On the violet derivatives of triphenyl-
methane (abst.), 6, 85: New method of producing acridine (abst.),
6, 86: Chrysaniline and some of its derivatives (abst.), 6, 237
Fischer, O., and C. Rudolph. New class of dye-stuffs (abst.), 5, 28
FISCHER, O. See also Bedall, K.
FISCHER, R. Alkaloids of Sabadilla, 14, 226
FITTICA, F. A second monobrombenzene (abst.), 12, 352
FITTIG, R. Researches upon the unsaturated acids (abst.), I, 236:
Constitution of tiglic acid and angelic acid (abst.), 1, 241: Forma-
tion of unsaturated hydrocarbons from unsaturated acids (abst.),
1, 246: Constitution of vinaconic acid (abst.), 7, 82
FITTIG, R., and F. Binder. Addition products of cinnamic acid
(abst.), 1, 242
FITTIG, R., and H. Liepmann. Constitution of isodiphenic acid and
fluoranthrene (abst.), 1, 169
FITTIG, R., and F. Röder. An acid isomeric with itaconic acid
(abst.), 5, 124
FITTIG, R, and C. Wurster. Atropic and isatropic acids (abst.), 1, 243
Fitz, A. Normal propyl alcohol from glycerol (abst.), - 2, 94
FLAVITZKY, F. Relations between amounts of rotation of plane of

FOSTER, C. LE N. Traveling blowpipe lamp, 1, 91; detection of boric
acid, 1,528
FOSTER, W. Nitrogen of coal during destructive distillation, also
estimation of nitrogen in coal and coke (abst.), 5, 95
FOULK, C. W. Effect of an excess of reagent in the precipitation of
barium sulphate, 18, 793: Effect of excess of reagent in precipita-
tion of magnesium ammonium phosphate, 20, (47)
Fox, W. Action of petroleum on lead (abst.), 10, 92
Fox, W., and J. A. Wanklyn. Determination of glycerol (abst.), 8, 27
Franchimont, N. On betulin (abst.), 1, 157: Coloring-matter of
sandal-wood (abst.), 1, 158: On lactucone (abst.), 1, 158: On zinc
acetate (abst.), 1, 158
FRANCIS, E. H. Toughened filter-paper (abst.), 7, 211
FRANKI, AND, P. F. Illuminating power of ethylene when burnt with
non-luminous combustible gases (abst.), 6, 46: Illuminating
power of hydrocarbons (abst.), 7, 213: Gasometric method of
determining nitrous acid (abst.), 10, 67
FRANKLAND, P. F., and F. Jordan. Gases evolved during the con-
version of grass into hay (abst.), 5, 114
FRANKLAND, P. F., and F. Turner. Action of allyl iodide upon
FRAUDE, G. Phthalein of o-cresol (abst.), 1, 395: Perchloric acid
as a reagent for alkaloids (abst.), 1,545
Frehse, M. Detection and colorimetric estimation of salicylic acid
(abst.), 9, 15
FREMERY, M. Arsenotungstic acid (abst.), 6, 306
FREMY, E. Method for analysis of vegetable tissues (abst.), - 1, 345
FRENCH, A. Process for obtaining ammonium chloride from the
nitrogen of coal, etc. (abst.), 10, 184
FRENZEI, J., and T. Weyl. Determination of casein by precipitation
with sulphuric acid (abst.), 8, 61
Fresenius, H. Determination of arsenic in pyrites (abst.), 10, 66:
Arsenic in bone phosphate fodder (abst.), II, 54
Fresenius, R. Examination of commercial copper (abst.), 4, 167:
Test for titanic acid (abst.), 7, 210: Separation of barium from
strontium (abst.), 12, 118, 410
FRESENIUS, R., and E. Borgmann. Analysis of pure wines (abst.), 6, 97
Fresenius, R., and E. Hintz. Determination of tin in tin slags
(abst.), 7, 210: Analysis of chrome iron (abst.), - 12, 117
FRESENIUS, R., and W. F. Fresenius. Detection of adulterations in
Portland cement (abst.), 6, 290
FRESENIUS, W. Variations in quality of Swedish filter-paper (abst.),
1, 376: Use of asbestos in filtration (abst.), 10, 69: Determination
of phosphoric acid in sweet wines (abst.), 11, 53: Examination of
alcoholic liquors (abst.), 12, 503
EDUCENIUS W. F. See Fresenius R

FREUND, M., and P. Herrmann. A new hexylamine and a new hexyl
alcohol (abst.), 12, 155
FREW, W. See Carnelley, T.
FREYTAG, B. Derivatives of propionic acid (abst.), 2, 135
FRIEDBURG, L. H. On bisulphide of carbon, 4, 252: Manufacture of
tartaric acid, 4, 292: Active principle of rennet, so-called chy-
mosin, 10, 98: On Graftian's new fat extractor, 10, 162: On Cur-
tius' hydrazine, 10, 164: On the formation of anthraquinoue under
peculiar conditions, 12, 26: On the preparation of thiophen, 12, 83:
Notes on quantitative analysis, 12, 131: Studies on resins, 12, 285,
392: On the relative intensity of chemical force, 12, 292: Action
of nitrous anhydride upon organic compounds. New quinone
oxime, 13, 111: Notes on acid calcium tartrate, and on alkyl
iodides, 13, 144
FRIEDBURG, L. H., and J. A. Mandel. On the action of nitrogen
trioxide upon different organic compounds, 12, 7, 54
FRIEDEL, C. Experiments on the combustion of the diamond (abst.), 6, 36
FRIEDEL, C., and M. Balsolm. Transformation of styrolene bromide
into methyl benzoate (abst.), 2, 92: Oxidation of ethylbenzene
(abst.), 2, 92: Action of bromine upon diphenylmethane (abst.),
2, 366 : Action of monobromdiphenylmethane on ammonia (abst.),
2, 436 : Synthesis of diphenylacetic acid (abst.), 2, 436
FRIEDEL, C., and J. M. Crafts. Direct combination of various metal
groups with benzene and toluene (abst.), 1, 397: Decompositions
produced by action of aluminum chloride (abst.), 4, 170: Action
of methylene chloride on toluene and benzene (abst.), 6, 163: De-
composing action of aluminum chloride on certain hydrocarbons
(abst.), 7, 142
FRIEDHEIM, C. Separation of vanadic from tungstic acid (abst.), 12, 175
FRIEDLÄNDER, P., and H. Ostermaier. Carbostyril (abst.) - 4, 230
FRIEDIANDER, T., and J. Mähly. Dinitrocinnamic acid (abst.), 5, 242
FRIEDRICH, R. Decomposition of mono-halogen substituted crotonic
acids by alkalies (abst.), 4, 206
FRIESE, G. See Bernthsen, A.
FRITZSCHE, P. Oxyphenylacetic acid (abst.), 1, 294: Oxyphenyl-
acetic acid and its derivatives, 2, 292
FROHMAN, E. D. See Noyes, W. A.
FROMMEL, J. See Clermont, P. de.
FRÜHLING, R., and J. Schulz. Analyses of milk (abst.), 9, 122
FRUTIGER, G. New ureometer (abst.), 8, 96
FÜRBRINGER, P. Precipitation of albumin in acid urine (abst.), 1, 348
FULTON, C. H. Assay of telluride ores, 20, 586
GABBA, L., and O. Textor. Influence of composition of water in
production of raw silk (abst.), 1, 159
GABRIEL, S. Benzylidenephthalide and iso-benzalphthalide (abst.), 9, 210
GABRIEL, S., and A Deutsch. Diphenyl derivatives containing sul-
phur (abst.), 2, 370
-) 3/-

GABRIEL, S., and H. Hendess. Benzyl derivatives (abst.), - 9, 211
GABRIEL, S., and P. Heymann. Anhydro-bases from amidomercap-
tans of the fatty series (abst.), 12, 158
GABRIEL, S., and W. E. Lauer. On propylamine (abst.), - 12, 158
GAL, H., and A. Étard. Researches upon strychnine (abst.), - 1, 273
GALBRAITH, W. Claim of priority (abst.), 1, 325
GALEWSKY, P. Action of ammonia on di- and tri- halogen substitu-
tion products of hydrocarbons (abst.), 12, 228
GANTTER, F. Determination of solids and fat in milk and butter
(abst.), 10, 27
GANTTER, F., and C. Hell. Bromo-substitution products of suberic
acid (abst,), 4, 204: Pimelic acid, an oxidation product of castor
oil (abst.), 8, 110
GAROLA, C. V. Contributions to study of oil cakes used in feeding 15, 656
GARRIGUES, W. E. The Gunning method for total nitrogen in fertilizers, 16, 795: Determination of melting-points and composition of
some candle material, 16, 825: Determination of potash in
manures, 17, 47: Analysis of bearing-metal alloys, with a new
volumetric method for determining copper, 19, 934: Determina-
tion of lead in alloys, 20, 508
CARTENMEISTER, R. Boiling-points and specific volumes of ethereal
salts of fatty acids (abst.), 8, 228
GARZAROLLI-THURNLACKH, K., and G. Schacherl. Chlorine mon-
oxide (abst.), 7, 244
GASIOROWSKI, K., and V. Merz. Nitriles from formanilide (abst.), 8, 74
GASIOROWSKI, K., and A. F. Wayss. On the diazo-compounds
(abst.), 7, 228
GASKELL, H., and F. Hurter. Preparation of sodium bicarbonate
(abst.), 6, 173
GASPARIN, P. DE. Dissemination, accumulation, and determination
of phosphoric acid in soils (abst.), 6, 137
GATTERMANN, L. Modification of Schiff's apparatus for the volu-
metric determination of nitrogen (abst.), 7, 92: Researches on
metric determination of hitrogen (abst.), 7, 92. Researches on
diazo-compounds (abst.), 12, 232
diazo-compounds (abst.), 12, 232 GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' syn-
diazo-compounds (abst.), 12, 232
diazo-compounds (abst.), 12, 232 GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' syn-
diazo-compounds (abst.), 12, 232 GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227
diazo-compounds (abst.), 12, 232 GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227 GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224  GATTERMANN, L., and A. Rossolymo. Modification of the urea chloride synthesis (abst.), 12, 229
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224  GATTERMANN, L., and A. Rossolymo. Modification of the urea chloride synthesis (abst.), 12, 229  GAUTIER, A. Chlorophyll (abst.), 2, 90: Observations on Vincent and
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224  GATTERMANN, L., and A. Rossolymo. Modification of the urea chloride synthesis (abst.), 12, 229  GAUTIER, A. Chlorophyll (abst.), 2, 90: Observations on Vincent and Delachanal's paper on methyl cyanide (abst.), 2, 433: Isomers of
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224  GATTERMANN, L., and A. Rossolymo. Modification of the urea chloride synthesis (abst.), 12, 229  GAUTIER, A. Chlorophyll (abst.), 2, 90: Observations on Vincent and Delachanal's paper on methyl cyanide (abst.), 2, 433: Isomers of phloroglucin (abst.), 2, 436: Insoluble modification of pepsin
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224  GATTERMANN, L., and A. Rossolymo. Modification of the urea chloride synthesis (abst.), 12, 229  GAUTIER, A. Chlorophyll (abst.), 2, 90: Observations on Vincent and Delachanal's paper on methyl cyanide (abst.), 2, 433: Isomers of phloroglucin (abst.), 2, 436: Insoluble modification of pepsin (abst.), 4, 237: On bacterian and physiological alkaloids, ptom-
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224  GATTERMANN, L., and A. Rossolymo. Modification of the urea chloride synthesis (abst.), 12, 229  GAUTIER, A. Chlorophyll (abst.), 2, 90: Observations on Vincent and Delachanal's paper on methyl cyanide (abst.), 2, 433: Isomers of phloroglucin (abst.), 2, 436: Insoluble modification of pepsin (abst.), 4, 237: On bacterian and physiological alkaloids, ptomaines, and leucomaines (abst.), 9, 114
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224  GATTERMANN, L., and A. Rossolymo. Modification of the urea chloride synthesis (abst.), 12, 229  GAUTIER, A. Chlorophyll (abst.), 2, 90: Observations on Vincent and Delachanal's paper on methyl cyanide (abst.), 2, 433: Isomers of phloroglucin (abst.), 2, 436: Insoluble modification of pepsin (abst.), 4, 237: On bacterian and physiological alkaloids, ptomaines, and leucomaines (abst.), 9, 114  GAUTIER, H. Direct chlorination of methylbenzoyl (abst.), 8, 167:
diazo-compounds (abst.), 12, 232  GATTERMANN, L., R. Ehrhardt, and H. Maisch. Friedel-Crafts' synthesis of ketones from phenolethers (abst.), 12, 227  GATTERMANN, L., and W. Hausknecht. Spontaneously inflammable hydrogen phosphide (abst.), 12, 224  GATTERMANN, L., and A. Rossolymo. Modification of the urea chloride synthesis (abst.), 12, 229  GAUTIER, A. Chlorophyll (abst.), 2, 90: Observations on Vincent and Delachanal's paper on methyl cyanide (abst.), 2, 433: Isomers of phloroglucin (abst.), 2, 436: Insoluble modification of pepsin (abst.), 4, 237: On bacterian and physiological alkaloids, ptomaines, and leucomaines (abst.), 9, 114

GAWALOVSKI, A. Scheibler's calcimeter as an azotometer (abst.),
1, 375: Comparative value of different filter-papers (abst.), 1, 376:
An indicator of neutrality in acidimetry and alkalimetry (abst.),
5, 245: Reagent bottles (abst.), 7, 173: Soap analysis (abst.),
7, 179: Bottles for reagents sensitive to light (abst.), - 7, 209
GAYON, U. Inactive glucose, or neutral sugar (abst.), - 2, 364
GAYON, U., and G. Dupetit. Fermentation of nitrates (abst.), - 5, 117
GEHRING, G. Butyl mono- and di-chloracetates (abst.), - 8, 180
GEISSLER, H. Determination of water in milk (abst.), - 1, 358
GEISLER, J. F. New condenser attachment, 10, 63: Notes on the
morphiometric assay of opium, 10, 143: The relative merits of the
Wanklyn and the Adams methods for determination of fat in milk
analysis, 12, 488: Signification of lactometer tests, 13, 93: Milk
analyses, 13, 120: Analysis of a Pekoe Ceylon tea, 13, 237: Detec-
tion of a yellow azo dye used for the artificial coloring of fats, 20, 110
GELZER, C. Derivatives of p-amido-iso-butyl benzene (abst.), - 10, 19
GENTH, F. A. Examination of North Carolina uranium minerals
(abst.), 1, 281
GENTH, F. A., JR. On several Spanish minerals (abst.), - 2, 43
GEORGES, [M]. Detection of peptones in blood and urine (abst.), 8, 231
GERBER, M. See Rosenstiehl, A.
GERBER, N. Addition of goat's milk to cow's milk (abst.), - 8, 233
GERLACH, G. T. Boiling-points of solutions of salts, etc. (abst.),
9, 109: Specific gravity tables (abst.), 10, 159
GERICHTEN, E. von. Constitution of phthalylchloride (abst.), - 2, 371
GERMAN, L. See Fischer, O.
GERRESHEIM, H. Contributions to knowledge of ammoniacal mer-
cury compounds (abst.), 1, 259
GEVER, W. E. See Morton, H.
GIACOSA, P. Preparation of phenolglycollic acid etc. (abst.), - 4, 496
GIACOSA, P. Determination of phenol (abst.), 4, 196: See also
Nencki, M.
GIBBS, W. Complex inorganic acids (abst.), 1, 111: Researches on
the complex inorganic acids (abst.), 1, 482
GIEBERMANN, R. See Riggs, W.
GILBERT, J. H. See Lawes, Sir J. B.
GILCHRIST, P. S. Improvements in manufacture of sulphuric acid,
15, 624; 16, 498
GILES, W. W., and A. Shearer. Estimation of sulphurous acid (abst.), 6, 194
GILL, A. C. See Dennis, L. M.
GILL, A. H. Determination of nitrates in potable water, 16, 122, 193:
Modification of Hinman's explosion pipette, 17, 771: Improved
gas pipette for the absorption of illuminants, 18, 67
GILL, A. H., and S. P. Hunt. Determination of methane and hydro-
gen by explosion, 17, 986 GILL, A. H., and H. A. Richardson. Determination of nitrites in
potable water, 18, 21

GIMINGHAM, C. H. Contributions to the development of the Spren-
gel air-pump (abst.), 6, 97
GINTL, W. F. Analysis of water of spring at Marienbad, Bohemia
(abst.), 2, 135
GIRARD, A. Transformation of hydrocellulose into friable pyroxylin
(abst.), 1, 400: Determination of astringent substances in wine
(abst.), 4, 242: Determination of starch in the potato (abst.), 10, 87
GIRARD, A. DE. See Engel, R.
GIRARD, C. Action of barium hydroxide on some aniline compounds
(abst.), 1, 397: Detection of aniline colors in wine (abst.), 1, 576:
Preparation of pure levulose (abst.), 2, 133
GIRARD, C., and L. L'Hote. Aniline dichromate (abst.), 9, 173
GIRARD, C. See also Caventou, E.
GIRARD, J. DE. Combinations of hydrogen phosphide with chloral
hydrate (abst.), 8, 199
GIRAUD, H. Volumetric separation of tin and antimony (abst.),
8, 200: A physical property of $\alpha$ -triphenylguanidine (abst.), 8, 203
GIRD, W. K. A gravimeter for sugar analysis, 16, 677
GLADDING, T. S. Determination of reverted phosphates, 4, 113: Esti-
mation of phosphoric acid as magnesic pyrophosphate, 4, 135:
Modification of apparatus for determination of nitrogen (abst.),
4, 160: Determination of rosin in fats (abst.), 4, 192: On the re-
version of phosphoric acid (abst.), 6, 168: Estimation of potash,
8, 12: Estimation of sulpliur in pyrites, 16, 398: Determination of
sulphur in pyrites; a reply, 17, 397: Gravimetric method of esti-
mating phosphoric acid as ammonium phosphomolybdate, 18, 23:
Microscopic detection of beef fat in lard, 18, 189: Estimation of
sulphur in pyrites, 18, 446: Determination of iron oxide and
alumina in phosphoric rock, etc., 18, 717: New method for the
estimation of iron oxide and alumina in phosphate rock, 18, 721:
Boric acid determination, 20, 288: See also Stillwell, C. M.
GLADSTONE, J. H., and A. Tribe. Aluminum alcohols, products of
their decomposition by heat (abst.), 4, 142: Action of light and
heat on cane and invert sugars (abst.), 5, 232: Hydroxylamine
(abst.), 5, 232: Recovery of iodine from organic iodide residues
(abst.), 5, 232: On tests for alcohol (abst.), 5, 233: Residual
phenomenon of the electrolysis of sulphuric acid (abst.), 5, 232:
Reaction of the copper zinc couple on nitric oxide (abst.), 5, 233:
Reducing action of spongy lead (abst.), 5, 233
GLASER, C. Determination of phosphoric acid (abst.), 7, 178: Deter-
mination of reverted phosphoric acid, etc. (abst.), 7, 179: Remarks
on Mohr's article on the determination of reverted phosphoric
acid (abst.), 7, 179: Estimation of thoria. Analysis of monazite
sand, 18, 782: Sodium peroxide in quantitative analysis, - 20, 130
GLATZEL, E. Synthesis of iron pyrites (abst.), 12, 155
GLEICHMANN, L. Reaction of dimethylphenylphosphine on ethylene
bromide (abst.) 4, 206 : See also Michaelis A

Godeffroy, R. Atomic weight of caesium (abst.), - 1, 106
GOES, B. Diphenyldiamidonaphthol (abst.), 2, 170
GOESSMANN, C. A. Contributions from the agricultural laboratory,
P. 1, 2, 60: Contributions to the chemistry of the American grape
vine, P. 2, 35: Recent experiments with sugar-cane in Louisiana,
P. 2, 52: Experiments with sugar-beet roots, P. 2, 56: Examina-
tion of Minnesota early amber cane, 1, 44: Experiments with fer-
tilizers upon sugar-cane, 1, 416 : Sugar in corn-stalks and melons,
1, 420: Contributions to the chemistry of fruit culture, 1, 423:
Analyses of intestinal concretions of horses, 1, 430: Examination
A = 4
GÖTSCHMANN, T. Methyl and dimethylidiacetonamine (abst.), 2, 175
GÖTTIG, C. Compound of calcium chloride and normal propyl alcohol
which moves on water (abst.), 12, 156
Gottsch, H. See Dürkopf, E.
GOLDBERG, A. Parahydroxysalicylic acid (abst.), 1, 495: See also
Schmitt, R.
Goldschmidt, H. Phosphorus pentasulphide (abst.), 4, 227: On
nitrosophenols (abst.), 6, 287
GOLDSCHMIDT, H., and A. Meissler. Constitution of tautomeric com-
pounds (abst.), 12, 167
GOLDSCHMIDT, H., and V. Meyer. Determination of density of gases
(abst.), 4, 176
GOLDSCHMIDT, H., and H. Schmid. On nitrosophenols (abst.), - 7, 230
Corporative I Coo Mahama C D
GOLDSMITH, L. See Madery, C. F.
GOLL, O. See Nietzki, R.
GOLL, O. See Nietzki, R.
GOLL, O. See Nietzki, R. GOMBERG, M. Action of Wagner's reagent upon caffeine and a new
GOLL, O. See Nietzki, R.  GOMBERG, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caf-
GOLL, O. See Nietzki, R.  GOMBERG, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenyl-
GOLL, O. See Nietzki, R.  GOMBERG, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790
GOLL, O. See Nietzki, R.  GOMBERG, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  GOMBERG, M., and A. Campbell. Hydrazo- and azo-derivatives of
GOLL, O. See Nietzki, R.  GOMBERG, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  GOMBERG, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780
GOLI, O. See Nietzki, R.  GOMBERG, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  GOMBERG, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  GOOCH, F. A. Determination of phosphoric acid as magnesium py-
GOLI, O. See Nietzki, R.  GOMBERG, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  GOMBERG, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  GOOCH, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and igni-
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220  Gooch, F. A., and J. E. Whitfield. Analysis of waters of the
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 779  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220  Gooch, F. A., and J. E. Whitfield. Analysis of waters of the Yellowstone National Park (abst.), 10, 188
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220  Gooch, F. A., and J. E. Whitfield. Analysis of waters of the Yellowstone National Park (abst.), 10, 188  Gordin, H. M., and A. B. Prescott. Atropine periodides and iodo-
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 790  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220  Gooch, F. A., and J. E. Whitfield. Analysis of waters of the Yellowstone National Park (abst.), 10, 188  Gordin, H. M., and A. B. Prescott. Atropine periodides and iodomercurates, 20, 329
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 779  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220  Gooch, F. A., and J. E. Whitfield. Analysis of waters of the Yellowstone National Park (abst.), 10, 188  Gordin, H. M., and A. B. Prescott. Atropine periodides and iodomercurates, 20, 329  Gordin, H. M. See also Prescott, A. B.
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 779  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220  Gooch, F. A., and J. E. Whitfield. Analysis of waters of the Yellowstone National Park (abst.), 10, 188  Gordin, H. M., and A. B. Prescott. Atropine periodides and iodomercurates, 20, 329  Gordin, H. M. See also Prescott, A. B.  Gore, G. Chemical action with carbon and its compounds (abst.), 6, 286
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 779  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220  Gooch, F. A., and J. E. Whitfield. Analysis of waters of the Yellowstone National Park (abst.), 10, 188  Gordin, H. M., and A. B. Prescott. Atropine periodides and iodomercurates, 20, 329  Gordin, H. M. See also Prescott, A. B.  Gore, G. Chemical action with carbon and its compounds (abst.), 6, 286  Gorgeu, A. Basic salts of manganese (abst.), 4, 242: Silicated chlo-
Goll, O. See Nietzki, R.  Gomberg, M. Action of Wagner's reagent upon caffeine and a new method for the estimation of caffeine, 18, 331: Perhalides of caffeine, 18, 347: New form of potash bulb, 18, 941: Tetraphenylmethane, 20, 773: Periodide of triphenylbrommethane, 20, 779  Gomberg, M., and A. Campbell. Hydrazo- and azo-derivatives of triphenylmethane, 20, 780  Gooch, F. A. Determination of phosphoric acid as magnesium pyrophosphate (abst.), 1, 537: Method for separation and ignition of precipitates (abst.), 1, 582: New method for separation and treatment of precipitates (abst.), 2, 43: Method for estimation of phosphoric acid as magnesium pyrophosphate (abst.), - 2, 220  Gooch, F. A., and J. E. Whitfield. Analysis of waters of the Yellowstone National Park (abst.), 10, 188  Gordin, H. M., and A. B. Prescott. Atropine periodides and iodomercurates, 20, 329  Gordin, H. M. See also Prescott, A. B.  Gore, G. Chemical action with carbon and its compounds (abst.), 6, 286

Gossin, E. Action of isobutyl chloride on benzene in the presence
of aluminum chloride (abst.), 6, 192
GOTTSCHALK, M. Action of nitric acid on pentamethylbenzene
(abst.), 37
Gousiorowski, K. See also Gasiorovski, K.
GOUSIOROWSKI, K., and V. Merz. Nitriles and carboxylic acids
from aromatic amines (abst.), 6, 85. GRABOWSKY, J. Galician ozokerite and ceresine, P. 1, 121
GRAEBE, C. Synthesis of anthraquinoline (abst.), - 6, 167, 234
GRAEBE, C., and H. Caro. Acridine (abst.), 2, 98
GRAEBE, C. See also Brunck, H.
GRANDEAU, H. Decomposition of aluminum phosphate at a high
temperature (abst.), 5, 119
GRANDVAL, A., and H. Lajoux. Rapid determination of nitric acid
(abst.), 7, 293.
GRAVES, E. E. See Plimpton, R. T.
GREEN, A. G., and S. Rideal. A volumetric method for the estima-
tion of nitrous acid (abst.), 6, 170
GREEN, A. G., C. F. Cross, and E. J. Bevan. New photographic
process (abst.), 12, 476
GREEN, A. G. See also Morley, H. F.
GREEN, F. T. Device for the adjustment of a balance, - 16, 699
GREEN, J. R. Composition of edible swallow's nest (abst.), - 7, 289
GREENE, W. H. Preparation of methylene chloride, etc., 1, 522:
Acetobenzoic anhydride (abst.), 2, 431: Remarks on Dr. Dore-
mus' apparatus for estimation of urea, 7, 166
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 2, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), 1, 100: Determination of nitrogen in horn, etc. (abst.), 1, 542
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 2, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), 1, 100: Determination of nitrogen in horn, etc. (abst.), 1, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 2, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), 1, 100: Determination of nitrogen in horn, etc. (abst.), 1, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 2, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), 1, 100: Determination of nitrogen in horn, etc. (abst.), 1, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), 1, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on picraminic acid (abst.), 4, 264: Introduction of the azo-group,
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on picraminic acid (abst.), 4, 264: Introduction of the azo-group, in the aromatic para-compounds (abst.), 7, 32: Experiments on
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on picraminic acid (abst.), 4, 264: Introduction of the azo-group, in the aromatic para-compounds (abst.), 7, 32: Experiments on diazo-compounds (abst.), 8, 51
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on picraminic acid (abst.), 4, 264: Introduction of the azo-group, in the aromatic para-compounds (abst.), 7, 32: Experiments on diazo-compounds (abst.), 8, 51
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on picraminic acid (abst.), 4, 264: Introduction of the azo-group, in the aromatic para-compounds (abst.), 7, 32: Experiments on diazo-compounds (abst.), 8, 51 GRIESSMAYER, V. Coloring-matter of wine, etc. (abst.), - 1, 578
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on picraminic acid (abst.), 4, 264: Introduction of the azo-group, in the aromatic para-compounds (abst.), 7, 32: Experiments on diazo-compounds (abst.), 8, 51 GRIESSMAYER, V. Coloring-matter of wine, etc. (abst.), - 1, 578 GRIFFITHS, A. B. Chemical and microscopical researches on the
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 22, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on picraminic acid (abst.), 4, 264: Introduction of the azo-group, in the aromatic para-compounds (abst.), 7, 32: Experiments on diazo-compounds (abst.), 8, 51 GRIESSMAYER, V. Coloring-matter of wine, etc. (abst.), - 1, 578 GRIFFITHS, A. B. Chemical and microscopical researches on the cell-contents of certain plants (abst.), 5, 101: Value of ferrous
mus' apparatus for estimation of urea, 7, 166 GREGG, W. H. New specific gravity bottle, 3, 26 GREIFF, P. Production of anthranilic acid from orthonitrotoluene (abst.), 2, 227 GREINER, E. New automatic pipette, 16, 643 GRESLY, J., and F. Meyer. Mesitylenephthaloylic acid (abst.) 5, 18 GRETE, E. A. Behavior of nitric acid when heated with soda-lime (abst.), I, 100: Determination of nitrogen in horn, etc. (abst.), I, 542 GREUEL, G. Solubility of iodine in fatty oils (abst.), 7, 202 GREVILLE, H. L. New residual product from coal gas (abst.), - 6, 24 GRIESS, P. Reaction for nitrous acid (abst.), I, 105: New class of ammonium compounds (abst.), 2, 224: Action of cyanogen on picraminic acid (abst.), 4, 264: Introduction of the azo-group, in the aromatic para-compounds (abst.), 7, 32: Experiments on diazo-compounds (abst.), 8, 51 GRIESSMAYER, V. Coloring-matter of wine, etc. (abst.), - 1, 578 GRIFFITHS, A. B. Chemical aud microscopical researches on the cell-contents of certain plants (abst.), 5, 101: Value of ferrous sulphate as a manure for certain crops (abst.), 6, 77: Occur-

paraffin shale deposit in Servia (abst.), 6, 244: Application of
iron sulphate in agriculture and its value as plant food (abst.), 7, 54
GRIFFITHS, A. B., and E. C. Conrad. Estimations of the amount
of salicylic acid in the pansy (abst.), 6, 233
GRIFFITH, A. B., and C. Platt. Composition of pelagine, - 17, 877
GRIMAUX, E. Synthesis of uric acid derivatives of the alloxan series
(abst.), 1, 172, 275: Pseudouric acid (abst.), 1, 389: New deriva-
tive of the parabanic series (abst.), 1, 487: Action of bromine on
quinoline and pyridine (abst.), 4, 242: Ferric ethylate and col-
loidal ferric hydroxide (abst.), 6, 92: Nitrogenized colloid derived
from amidobenzoic acid (abst.), <b>6</b> , 135: On glyceryl aldehyde
(abst.), 9, 101: On a fermentable carbohydrate (abst.), 10, 78:
On the m-pyrazolones of Pinner and Lifschutz (abst.), - 10, 82
GRIMAUX, E., and P. Adam. Action of bromine upon dichlorhydrin
(abst.), 1, 486: Action of bromine upon epichlorhydrin (abst.), 2, 364
GRIMAUX, E., and L. Lefèvre. Transformation of glucoses into dex-
trins (abst.), 8, 181: On dioxethyl acetone (abst.), - 10, 188
GRIMAUX, E., and J. Tscherniac. Preparation of malonic acid (abst.), 1, 385
GRITTNER, A., and J. Szilasi. Determination of rosin in soaps and
fats (abst.), 8, 205
GROOT, J. DE. Determination of red coloring-matters in wine (abst.), 4, 191
GROSJEAN, B. J. Determination of nitric nitrogen in guano (abst.),
1, 356: Determination of tartaric acid in lees and argols (abst.), 1, 369
GROSJEAN, B. J., and R. Warington. Contributions to the chemistry
of tartaric and citric acids (abst.), 5, 231
GROSSHEINTZ, H. Tetrallylammonium bromide and triallylamine
(abst.), 1, 387
GROSSMANN, J. Determination of sulphites and thiosulphates (abst.), 1, 89
GROSVENOR, W. M. New solvents for perchromic acid, - 17, 41
GRUNEBERG. Progress of Stassfurt industry (abst.), 4, 75
GRUNEWALD, W. o-Thioxen and o-thiophendicarboxylic acid (abst.), 9, 193
GRUBER, D. See Musculus, F.
GUARESCHI, J. Oxidation of thialdine with nitric acid (abst.), - 1, 555
GUDEMAN, E. A new method for the determination of vapor densi-
ties, 12, 399: Peculiar reaction of Niagara river water, - 14, 221
GUNSBERG, R. Simple form of colorimeter (abst), 1, 91
GUNTHER, A., and B. Tollens. Fucose, from sea weed, an isomer of
rhamnose (abst.), 12, 476
GUERIN, G. Determination of phosphoric acid in urine (abst.), 4, 197
GUICHARD, [M.] Detection of Bordeaux-red in wines (abst.) - 4, 191
GUIGNET, E. Extraction of the green material of leaves, etc. (abst.), 7, 141
Guillemin, G. Alloys of cobalt and copper (abst.), - 7, 285
GUINOCHET E. Aconitates (abst.) 4. 221
GULDBERG, C. M., and P. Waage. Chemical affinity (abst.), - 1, 295
GUMPERT, F. Phenylcyanate (abst.), 7, 174
GUNNING I W Possibility of fungoid growth in atmosphere free

from oxygen (abst.), 2, 136: Modification of the Kjeldahl method
(abst.), 11, 54
GUNTZ, [M]. Heat of formation of some fluorides (abst.), 6, 36:
Heat of neutralization of bases with hydrofluoric acid (abst.),
6, 37: On the fluorides of sodium (abst.), 6, 74: Heat of formation
of fluoride, chloride, and oxychlorides of antimony (abst.), 6, 157:
See also Berthelot, M.
GUSTAVSON, G. Reactions in presence of aluminum chloride and
bromide (abst.), 2, 172: Aromatic bromine compounds from
paraffin (abst.), 6, 95
GUTHRIE, F. B. On the solubility of certain salts in fused sodium
nitrate (abst.), 7, 53
GUYARD, A. Note on the carminaphte of Laurent (abst.), 1, 272:
Potassium biniodide (abst.), 1, 384: Action of oxalic acid on chlo-
rates, bromates and iodates (abst.), 1, 384: Separation and deter-
mination of chlorine, bromine and iodine (abst.), 1, 384: Catalytic
phenomena caused by viscosity (abst.), 1, 386: Copper ammo-
nium oxyferrocyanide (abst.), 1, 388: Special law applicable to
metallic ferrocyanides (abst.), 1, 388: Atomic weight of uralium
(abst.), 1, 527: Researches on nitrogen iodide (abst.), 6, 34: Re-
searches on the double iodide of copper and nitrogen (abst.), 6, 34:
Note on furfuraldehyde (abst.), 6, 132: Synthesis of tartaric glu-
coside (abst.), 6, 132: Note on analysis of soils (abst.), 6, 168:
Note on determination of ammoniacal nitrogen in soils (abst.),
6, 169: Note on separation and determination of lime (abst.),
6, 169: Action of air on solutions of tannin, etc. (abst.), - 6, 171
GUYARD, A., (Hugo Tamm). Estimation of oxides of nitrogen as
animonia (abst.), 4, 160
Guyor, P. On alunite (abst.), 5, 117
Guyor, P., and R. Bidaux. Detection of coralline and fuchsine in
wine (abst.), 1, 576
HAACKE, A. Kieselguhr and its technical application (abst.), - 6, 140
HAAS, B. Determination of sulphurous acid in wines (abst.), - 4, 192, 205
HAAS, H. See Hilger, A.
HABERMANN, J. Glycyrrhizin (abst.), 2, 180
HADDOCK, A. G. Titration of sulphuric acid (abst.), 1, 330
HAGELBERG, I. Sulphocyanogen and selenocyanogen compounds
(abst.), 12, 231
HAGEN, M. Lupanine from the seeds of Lupinus angustifolius
(abst.), 7, 247
HAGER, H. Examination of mustard-oil (abst.), 8, 87
HAHN, E. See Städel, W.
HAHN, H. C. Specific gravity of sodium chloride solutions, - 20, 621
HAKE, C. N. Note on the Stassfurt potash industry (abst.), - 6, 24
HAKE, H. W. See Dupré, A.
HALBERSTADT, W. Vanadium trichloride from vanadium trisulphide

HALE, A. C. Ninth general meeting: announcements, 16, 575
HALEY, E. J. Report on recent methods in fertilizer analysis, - 15, 217
HALL, V. J. Simple fat extractor (note), 19, 586
HALLER, A. Carbonic ether of borneol (abst.), 4, 76: Essential oil of
savory (abst.), 4, 77: Campholurethane (abst.), 4, 235: Two
stereoisomeric campholurethanes (abst.), 6, 163: Action of alco-
holic potash on urea, thiourea, and substituted ureas (abst.), 8, 166
HALLOCK, A. P. Estimation of sulphuretted hydrogen in gas by
direct weight, 4, 177: Carl H. Schultz (obituary), - 19, 676
HALLOCK, E. J. Paranitro- and paramido-phenetol (abst.), - 1, 485
HAMBURG, E. W. Determination of iron in organic substances
(abst.), 1, 347
HAMBURGER, S. Injury done to vegetation by gases arising from cer-
tain manufacturing processes (abst.), 6, 198
HAMILTON, C. C. See Bigelow, W. D.
HAMMARSTEN, O. On the sulphur contained in casein and the deter-
mination of sulphur in proteid substances (abst.), 8, 60
HAMNER, S. G. See Howe, J. L.
HANCOCK, D. Preparation of standard iodine solutions, 16, 431
HANDY, J. O. The exact determination of phosphorus by the molyb-
date method in iron, steel, and ores, which contain arsenic, 16, 231:
Barium hydroxide as an absorbent in carbon determinations in
steel, 17, 247: Aluminum analysis, 18, 766
HANKÓ, W. Apparatus for determination of nitrogen by Dumas'
method (abst.), 1, 375
HANNIN, F. See Rindell, A.
HANNIN, F. See Rindell, A.  HANRIOT, M. Constitution of epichlorhydrin (abst.), 2, 91: Action
HANNIN, F. See Rindell, A.  HANRIOT, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),
<ul> <li>HANNIN, F. See Rindell, A.</li> <li>HANRIOT, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),</li> <li>6, 92: Decomposition by heat of acids of the aliphatic series</li> </ul>
HANNIN, F. See Rindell, A.  HANRIOT, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),  6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25
HANNIN, F. See Rindell, A.  HANRIOT, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),  6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  HANTZSCH, A., and A. Werner. Stereochemistry in molecules con-
HANNIN, F. See Rindell, A.  HANRIOT, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),  6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  HANTZSCH, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166
HANNIN, F. See Rindell, A.  HANRIOT, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),  6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  HANTZSCH, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  HANTZSCH, A., and A. Zeckendorf. Derivatives of p-quinonedicar-
HANNIN, F. See Rindell, A.  HANRIOT, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),  6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  HANTZSCH, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  HANTZSCH, A., and A. Zeckendorf. Derivatives of p-quinonedicar-
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),  6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),  6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.),  6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126  Hardin, W. L. Atomic masses of silver, mercury, and cadmium by
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126  Hardin, W. L. Atomic masses of silver, mercury, and cadmium by the electrolytic method, 18, 990: Atomic mass of tungsten, - 19, 657
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126  Hardin, W. L. Atomic masses of silver, mercury, and cadmium by the electrolytic method, 18, 990: Atomic mass of tungsten, - 19, 657  Hardtung, E. See Post, J.
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126  Hardin, W. L. Atomic masses of silver, mercury, and cadmium by the electrolytic method, 18, 990: Atomic mass of tungsten, - 19, 657  Hardung, E. See Post, J.  Hardy, H. J. See Arnold, J. O.
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126  Hardin, W. L. Atomic masses of silver, mercury, and cadmium by the electrolytic method, 18, 990: Atomic mass of tungsten, - 19, 657  Hardy, H. J. See Post, J.  Hardy, H. J. See Arnold, J. O.  Hare, C. L. New table for qualitative separation of metals of iron
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126  Hardin, W. L. Atomic masses of silver, mercury, and cadmium by the electrolytic method, 18, 990: Atomic mass of tungsten, - 19, 657  Hardy, H. J. See Post, J.  Hardy, H. J. See Arnold, J. O.  Hare, C. L. New table for qualitative separation of metals of iron group,
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126  Hardin, W. L. Atomic masses of silver, mercury, and cadmium by the electrolytic method, 18, 990: Atomic mass of tungsten, - 19, 657  Hardy, H. J. See Post, J.  Hardy, H. J. See Arnold, J. O.  Hare, C. L. New table for qualitative separation of metals of iron group,
Hannin, F. See Rindell, A.  Hanriot, M. Constitution of epichlorhydrin (abst.), 2, 91: Action of sodium on epichlorhydrin (abst.), 2, 91: On strychnine (abst.), 6, 92: Decomposition by heat of acids of the aliphatic series (abst.), 8, 25  Hantzsch, A., and A. Werner. Stereochemistry in molecules containing nitrogen (abst.), 12, 166  Hantzsch, A., and A. Zeckendorf. Derivatives of p-quinonedicar-boxylic ester (abst.), 9, 213  Happ, J. p-Quinolinesulphonic acid (abst.), 6, 236  Harcourt, A. V. New unit for photometric measurements (abst.), 1, 373  Hardin, M. B. Flame reactions of silver, P. 1, 2, 33: Determination of calcium as carbonate after precipitation as oxalate, - P. 2, 126  Hardin, W. L. Atomic masses of silver, mercury, and cadmium by the electrolytic method, 18, 990: Atomic mass of tungsten, - 19, 657  Hardy, H. J. See Post, J.  Hardy, H. J. See Arnold, J. O.  Hare, C. L. New table for qualitative separation of metals of iron group,

HARRIS, H. B. Volumetric determination of cobalt, 20, 173: See also
Smith, E. F.
HARRISON, J. B., and J. Williams. The proportions of chlorine and
of nitrogen as nitric acid and as ammonia in certain tropical rain
waters, 19, I
HART, E. Nitrosulphobenzoic acid and some derivatives (abst.), 2, 44:
On condensation, especially on the condensation of nitric acid,
17, 576: Points in the distillation of nitric acid, 17, 580: Purifica-
tion of glucinum salts, 17, 604
HART, P. On the concentration of sulphuric acid (abst.), 6, 244
HARTLEY, W. N. Researches on relation of molecular structure of
carbon compounds to their absorption spectra (abst.), 4, 144:
Photographs of ultra-violet spectra (abst.), 4, 169: Contributions
to chemistry of cerium compounds (abst.), 4, 109: Contributions
rhabdophane (abst.), 4, 202: On the spectrum of beryllium and its
relative position among the elements (abst.), 5, 115: Homologous
spectra (abst.), 5, 236: Spectrum photography in relation to quan-
titative analysis (abst.), 6, 243: Absorption spectra of the alka-
loids (abst.), 6, 309
HARTMAN, W. E. See Campbell, E. D.
HARTMANN, A. Action of phosgene on o-diamines (abst.), - 12, 228
HARTMANN, A., and Schulze. Lanolin, 8, 109
HARTWIG, E. Wine oil (abst.), 1, 296
HARZ, C. O. Microscopic examination of well water (abst.), - 1, 367
HASSELT, A. VAN. Determination of boiling-points (abst.), - 1, 376
HASTINGS, C. S. On Lockyer's hypothesis that the elements are
compound (abst.), 1, 113
HAUSKNECHT, W. See Gattermann, L.
HAUTEFEUILLE, P., and J. Chappuis. Composition and molecular
weight of pernitric acid (abst.), 4, 237: Liquefaction of ozone
(abst.), 4, 238
HAUTEFEUILLE, P., and A. Perrey. Aluminum oxychlorides (abst.), 7, 284
HAWLICZEK, J. See Lippmann, E.
HAYCRAFT, J. B. Determination of uric acid (abst.), 8, 78
HAYES-CAMPBELL, J. See Cushman, A. S.
,
HAZURA, K. See Bauer, A.
HEATH, G. L. Estimation of sulphur in refined copper, 17, 814:
Cheap adjustable electrolytic stand, 18, 558: Improvements in
colorimetric tests for copper, 19, 24: New calibrated weighing
flask, 19, 198: Study of methods for the estimation of sulphur in
coal, 20, 630
Heaton, C. W. Zinc in drinking water (abst.), 6, 77
Hеснт, О. See Iwig, F.
HECKEL, E. Analysis of kola nuts (abst.), 4, 234
HEHNER, O. Pavy's method for determination of glucose (abst.),

1, 341: Determination of phosphoric acid (abst.), 1, 538: Analysis
of milk (abst.), 4, 188: Analysis and composition of bees-wax
(abst.), 6, 170: Estimation of glycerol in soaps, etc. (abst.),
10, 182: Natural aperient bitter waters (abst.), - 10, 183
HEHNER, O., and C. A. Mitchell. On the determination of stearic
acid in fats, 19, 32
HEHNER, O., and H. D. Richmond. New method of folding filter-
papers (abst.), 9, 175
HEIDENHAIN, H. Determination of organic matter by moist oxida-
tion, 15, 71: Determination of carbon dioxide by absorption, - 18, 1
HEIM, R. See Weber, A.
HEINRICH, [M]. Determination of dextrose and inverted sugar in
presence of saccharose (abst.), 1, 344 HEINZELMAN, G., and L. Spiegelberg. Pentabrombenzenesulphonic
acid (abst.), 2, 186
HELD, A. Note on ethyl- and methyl-acetylcyanate of ethyl (abst.), 6, 164
HELL, C., and P. Schoop. Dibromcapric acid (abst.), - 1, 292
HELL, C., and F. Urech. New combination of carbon with sulphur
and bromine (abst.), 4, 226: Action of bromine on carbon bisul-
phide (abst.), 5, 26  HELL, C. See also Gantter, F.
HELLON, R. See Tscherniac, J.
HEMBERT, F., and L. Henry. New process for producing hydrogen
(abst.), 8, 59 HEMPEL, W. Determination of hydrogen gas by absorption (abst.),
1, 371: Fractional combustion of hydrogen in gaseous mixtures
(abst.), 1, 372: Limits to detection of carbon monoxide (abst.),
1, 556: Gas furnace with arrangement for oxidation (abst.),
1, 585: Gas furnace with arrangement for oxidation (abst.), 1, 585: Determination of nitrous oxide (abst.), 4, 160: Behavior
of different forms of carbon towards iron at high temperatures
(abst.), 8, 72: Combustion under high pressure (abst.), - 12, 349
HENDESS, H. See Gabriel, S.
HENNINGER, A. Presence of glycol in wine (abst.), 4, 242: Products
of the reduction of erythrol by formic acid (abst.), 6, 133
HENRY, L. Monochlorallyl alcohol and its derivatives (abst.), 5, 119:
See also Hembert, F.
HENZOLD, O. See Kreusler, U.
HERMANN, R. Specific gravities and atomic volumes of the metals
of the cerium group, etc. (abst.), 1, 295
HERRMANN, P., and B. Tollens. The sugar in Symphoricarpus race-
mosa (abst.), 7, 208
HERRMANN, P. See also Freund, M.
HERROUN, E. F. Volumetric determination of antimony (abst.) - 4, 167
HERTY, C. H. Mixed double halides of platinum and potassium, 18, 130
HERTY, C. H., and T. R. Boggs. Study of the mixed halides and
halothiocyanates of lead, 19,820
HERTY, C. H., and J. C. Simin. Mercuric chlorothic variate - 18, 006

HERTZ, J. Volhard's method for determination of silver, etc. (abst.), 1, 535
HERZFELD, A. Acetyl compounds of some carbohydrates, etc. (abst.), 2, 225
HERZIG, J. Two new cyanuric acids (abst.), 1, 289
HESS, F. Separation of nitroglycerol from nitrocellulose (abst.), - 1, 366
HESS, F., and J. Schwab. Determination of nitrogen in nitroglycerol
(abst.), 1, 102
HESS, W. See Bernthsen, A.
HESSE, O. Dicinchonine (abst.), 7, 82: Benzoyl derivatives of aro-
matic amines (abst.), 7, 245: Cupreine and homoquinine (abst.), 7, 247
HEUMANN, K. Reactions of silver ultramarine (abst.), 1, 163:
Nomenclature of complex azo compounds (abst.), 5, 24: Burning
of sulphur with white phosphorescent flame (abst.), 5, 65
HEUMANN, K., and P. Köchlin. Sulphuryl chloride with non-metals
and with tin (abst.), 4, 261
HEUMANN, K. See also Billitz, G.
HEYMANN, P. See Gabriel, S.
HIBBARD, P. L. Quick estimation of starch, 17, 64
HIBBS, J. G. Atomic weights of nitrogen and arsenic, 18, 1044
HIBBS, J. G., and E. F. Smith. Action of metallic magnesium upon
manganous salts, 16, 822
HIBBS, J. G. See also Smith, E. F.
HIGGIN, A. Dibenzoylaniline and its isomers (abst.), 4, 171: See also
Cross, C. F.
HILDITCH, T. Determination of the atomic weight of oxygen (abst.), 6, 48
HILFAHRT, H. Modification of Kjeldahl's method (abst.), - 7, 291
HILGARD, E. W. The chemical and physical investigation of soils, - 16, 34
HILGER, A. Detection of ethyldiacetic acid in urine (abst.), I, 254:
Solanine and its decomposition products (abst.), 1, 255: Proper-
ties of coloring-matter of red wine, etc. (abst.), 1, 578
HILGER, A., and H. Haas. Separation and determination of tin and
titanium (abst.), 12, 175 Hill, J. W. Hygiene of water, 19, (18)
HILLEBRAND, W. F. Occurrence of barium and strontium in silicate
rocks, 16, 81: Estimation of small amounts of barium and stron-
tium in silicate analysis, 16, 83: Plea for greater completeness in rock analysis, 16, 90: Warning against use of fluoriferous hydro-
gen peroxide in estimating titanium, 17, 718: Colorimetric estima-
tion of small amounts of chromium, 20, 454, (49): Volumetric esti-
mation of vanadium in presence of small amounts of chromium,
20, 461, (65): See also Noyes, W. A.
Himly, C. Testing water for bacteria (abst.), 1, 103
HINDS, J. I. D. Improved ureometer, 15, 650: Hydrogen sulphide
generator, 17, 420: Photometric method for the quantitative deter-
mination of lime and sulphuric acid, 18, 661
HINE, S. K. See Mason, W. P.
HINSBERG, O. Quinoxaline (abst.), 6, 308
HINTZ, E. See Fresenius, R.
,

means of potassium permanganate (abst.), 1, 80, 169: Pyridinecar-
boxylic acids (abst.) 2, 96: Pyridinetricarboxylic acid from alka-
loids of quinine group (abst.), 2, 172
HOOKER, S. C. See Bamberger, E., and Japp, F. R.
HOOPER, D. Gymnemic acid (abst.), 10, 191
HOPKINS, C. G. Safety distillation tube for rapid work in nitrogen
determinations, 18, 227: The oil of corn, 20, 948: Some errors in
the determination of nitrogen, 20, 961: Condenser for extraction
,
HOPKINS, N. M. Electric furnaces for the 110-volt circuit, - 20, 769
HORBACZEWSKI, J., and F. Kanera. Influence of glycerol and fat on
secretion of uric acid in man (abst.), 8, 185
HORNBERGER, R. Determination of alkalies in ashes of plants (abst.), 1, 357
HORNE, W. D. Automatic extractor, 15, 270: Rapid and accurate
analysis of bone-black, 17, 51: Decarbonization of bone-black - 17, 503
Horsin-Déon, P. Neutral sugar and inverted sugar (abst.), 1, 488:
Palm sugar from Calcutta (abst.), 1, 488: Neutral sugar and in-
verted sugar (abst.), 2, 364
HORSTMANN, A. Relative affinity of oxygen for hydrogen and carbon
monoxide (abst.), 1, 164
HORTON, H. E. Fermentation of glucose syrups, 16, 808: Alkali and
sulphurous acid processes used in the manufacture of starch, 17, 68:
Use of sulphurous acid in manufacture of glucose syrup and grape-
sugar, 17, 281: Acidity of glucose syrup and grape-sugar, 17, 402:
Ash in glucose syrup and grape-sugar 17, 403
HORTON, W. A. See Austen, P. T.
Hosäus, H. Pentaglycerol, 15, 707: Lactone from pyrotartaric acid
and formaldehyde, 15, 707: See also Tollens, B.
Hough, G. J. A new electrolytic stand, 20, 268: Aluminum used as
an electrode, 20, 302
HOUZEAU, A. New form of dropping glass (abst.), 1, 379
Howard, C. D. Exact dilution of liquid reagents by formula (note), 19, 587
Howard, D., and J. Hodgkin. New alkaloid from cinchona bark
and the state of t
(abst.), 4, 168
Howe, J. L. Ruthenium and its nitrosochlorides, 16, 388: Contribu-
tions to the knowledge of ruthenocyanides, 18, 981
Howe, J. L., and H. D. Campbell. New ruthenocyanides and the
double ferrocyanide of barium and potassium, 20, 29
Howe, J. L., and S. G. Hamner. Color of sulphur vapor, - 20, 757
HOWE, J. L., and P. S. Mertins. Reinsch's test for arsenic and anti-
mony, 18, 953
Howe, J. L., and E. A. O'Neal. Formation of alums by electrolysis, 20, 759
HÜBNER, H. Nitrosalicylic acids, and isomerisms of benzene deriva-
tives (abst.), 1, 233
HÜFNER, G. Contributions to the chemistry of bile (abst.), 1, 493:
New form of spectrophotometer (abst.), 1,583
HUGOUNENO, L. Amyl monochloracetate (abst.), 8, 74: Presence of

levorotary β-oxybutyric acid in the blood of a diabetic patient
(abst.), 9, 113
HUGOUNENO, I, and J. Morel. A new double carbonate of potassium
and sodium (abst.), 77
HUMMEL, J. J., and A. G. Perkin. New compounds of hæmatein and
brazilein (abst.), 4, 260
HUMPIDGE, T. S. On the atomic weight of glucinum (abst.), - 7, 113
HUNT, C. Gaseous fuel applied to the heating of gas retorts (abst.), 6, 105
HURTER, F. Determination of cyanogen in soda lyes (abst.), 1, 108:
An attempt to utilize waste heat by Perkin's pipes (abst.), 6, 106:
See also Gaskell, H.
HURTY, J. N. On the determination of crude fiber in cereals - 19, (39)
HUTCHINSON, C. C. Disposal of sewage sludge (abst.), - 6, 103
Hyde, F. S. Scheme for identification of acetanilide, phenacetine,
quinine sulphate, etc., 17, 933: Preparation of sodium nitroprus-
side, 19, 23: Modification of the thalleoquin test for quinine, 19, 331
IHL, A. Preparation of axle grease (abst.), 8, 26
ILES, M. W. Oxidation of xylenesulphonic acids, P. 2, 15: Blow-pipe
experiments upon chloride, bromide, and iodide of silver, P. 2, 74:
See also Remsen, I.
ILOSVAY, L. Nitrous acid in the atmosphere (abst.), 12, 69: See also
Berthelot, M.
IRVINE, R. Action of bleaching agents upon ink (abst.), 9, 224
IRVING, A. Ancient mortars (abst.), 10, 158 ISAMBERT, F. Phenomena of dissociation (abst.), 6, 75
ISBERT, A., and J. Stutzer. Determination of phosphoric acid (abst.), 9, 218
ISTEL, E. See Claus, A.
IWIG, F., and O. Hecht. Products of the dry distillation of some sil-
ver salts of fatty acids (abst.), 8, 64
JACKSON, C. L. Researches on the substituted benzyl compounds
(abst.), 1, 282
JACKSON, H. Action of sulphuric acid upon potassium iodide (abst.),
5, 232: On the determination of hardness in waters (abst.), 6, 170
Jackson, O. R. See Baeyer, A.
JACOBJ, C. Review of the Knop-Hufner method for the determination
of urea (abst.), 7, 292
JACOBSEN, E., and P. Julius. Condensation products of cinnamic
acid and gallic acid (abst.), 9, 196
JACOBSEN, O. Fusion of potassium mesitylenesulphonate with potas-
sium hydroxide (abst.), 1, 252: 1,2,4-o-Xylidine (abst.), 6, 162:
Nitro-o-toluic acid (abst.), 6, 163: Action of sulphuric acid on
bromodurene (abst.), 9, 215  JACOBSEN, O., and R. Neumeister. Bromchloral, chlorbromal, bromo-
chloroform and chlorobromoform (abst.), 4, 269  JACQUELAIN, V. A. Pure carbon for electric light (abst.), - 4, 235
JACQUEMART. Reagent for detection of alcohol (abst.), 1, 339  JACQUEMIN, G. Preparation of evanogen in the wet way (abst.), 7, 172
IACQUEMIN, G. Preparation of cyanogen in the wet way (abst.), 7, 172

JAFFE, S. H. Detection of salicylic acid in foods (abst.), - 8	, 278
JAHN, H. Action of phosphonium iodide on bisulphide of carbon	
(abst.), 2, 171: Vapor density of bromine (abst.), - 5	, 26
JAHNS, E. Occurrence of carvacrol in the essential oil of Satureia	
hortensis (abst.), 5, 24: Trigonelline (abst.), 9	, 215
JAILLARD, P. Detection of adulterations in oil of geranium (abst.), I	, 105
JAKSCH, R. VON. Occurrence of volatile fatty acids in urine (abst.), 8	, 86
JAMES, J. W. Ethylene chlorobromide and some of its derivatives	
(abst.), 5	, 93
JAMES, W. Ethylene chlorosulphocyanide and β-chlorethylsulphonic	, ,
	, 134
JANNETTAZ, E. Note on the observations of Spring (abst.), 6, 38:	
Note on development of schistocity in compressed bodies (abst.), 6	, 38
JANOVSKY, J. V. Niobite of the Iser mountains (abst.), 2, 171: On	
the direct substitution products of azobenzene (abst.), - 5	, 54
JAPP, F. R. $\alpha$ - and $\beta$ -phenanthrenecarboxylic acids, and on the con-	
stitution of phenanthrene (abst.), 2, 347: Constitution of lophine	
(abst.), 5, 91: Condensations of compounds which contain the di-	
	, IOI
JAPP, F. R., and S. C. Hooker. Action of aldehydes and ammonia on	
benzil (abst.), 7	, 31
JAPP, F. R., and H. H. Robinson. Constitution of amarine and lo-	
	, 225
JAPP, F. R., and F. W. Streatfield. Action of aldehydes on phenan-	
thraquinone in presence of ammonia (abst.), 4, 198: Action of	
acetone on phenanthraquinone, etc. (abst.), 4, 221: Condensation	
product of phenanthraquinone with ethyl acetoacetate (abst.), 5,	
92: Application of aldehyde and ammonia reaction in determining	
	, 199
JAWEIN, L. Hexylenes from tertiary hexyl alcohols (abst.), 1, 251:	
See also Beilstein, F.	
JAY, [M]. Influence of sugar on the determination of urea in urine	
(abst.), 2	, 132
JAY, R. See Curtius, T.	
JEAN, F. Determination of tannic and oenogallic acid in wine (abst.),	
4, 191, 233: Clarification of champagne wines (abst.), 4, 234: De-	
	, 249
JENKINS, E. H. See Johnson, S. W.	
JEWETT, F. F. Arrangement for washing precipitates with boiling	
·	, 517
JEWETT, J. Influence of acetic acid on separation of iron, etc. (abst.), I	, 484
JOANNIS, A. Heat of formation of hydroferricyanic acid (abst.), 4,	
231: Hydroferrocyanic acid (abst.), 4, 231: Hydroferricyanic acid	
(abst.), 4, 232: Heat of formation of hydroferricyanic acid and of	
some ferricyanides (abst.), 4, 233: Heat of formation of sulphocy-	
	, 234
lörgensen, S. M. Bromopurpureocobalt salts (abst.), 1, 295; Con-	

tributions to chemistry of chrom-ammonium compounds (abst.), 2, 290
JOHANSON, E. Determinations of alkaloids in cinchona bark (abst.), 1, 552
JOHNSON, E. S. Some apparatus for the technical analytical labora-
tory, 19, 281
JOHNSON, S. H. On the filtration of potable water (abst.), - 6, 140
Johnson, S. W. Determination of nitrogen by combustion with cal-
cium hydroxide (abst.), 6, 168: The determination of phosphoric
acid, 16, 462: Composition of wood gum, 18, 214
JOHNSON, S. W., and E. H. Jenkins. Determination of nitrogen in
analysis of agricultural products (abst.), 1, 281, 351: On a method
for the determination of phosphoric acid (abst.), 1, 281: Rapid
and exact method for determination of phosphoric acid (abst.), 1, 352
JOHNSTONE, A. Detection of antimony in minerals (abst.), - 10, 173
JOHNSTONE, W. Use of acetic acid in milk analysis (abst.), 8, 205:
Substitution of asbestos cloth for blotting-paper in milk analysis
(abst.), 9, 175: Does lead acetate precipitate hop bitters? (abst.), 9, 176
JOLLES, A. Potassium manganate and its analytical importance
(abst.), 9, 119; Determination of bile constituents in urine (abst.),
12, 414: New test for albumin (abst.), 12, 415: Determination of
albumin in bacterial urine (abst.), 12, 415
JOLY, A. Saturation of phosphoric acid by bases (abst.), 4, 232:
Preparation of arsenic acid (abst.), 7, 285: Preparation of phos-
phoric acid (abst.), 8, 70
JONES, E. W. T. Specific gravity of fat at 100°, etc. (abst.), - 10, 157
JONES, J. Determination of manganese in manganese bronze, - 15, 414
JORDAN, F. See Frankland, P. F.
JORISSEN, A. Test for nitrites in water (abst.), 4, 163: Separation of
small amount of cobalt from nickel (abst.), 4, 166: Furfural in
fermented liquids (abst.), 4, 268: Detection of nitrates in potas-
sium chlorate (abst.), 9, 174
JOWANOWITSCH, M. K. Decomposition of tartaric acid in the pres-
ence of glycerol at a high temperature (abst.), 8, 110
JÜPTNER, H. von. Separation of gold and silver (abst.), 1, 99: Wi-
borgh's gas-volumetric method for determination of carbon in iron
and steel (abst.), 10, 68
JULIAN, F. Laboratory notes, 15, 113
JULIEN, A. A. Examination of carbon dioxide in the fluid cavities of
a topaz, 3, 41
JULIUS, P. Behavior of silver chloride, bromide, and iodide, towards
bromine and iodine (abst.), 5, 245: See also Jacobsen, E.
JUNGFLEISCH, E. Synthesis of optically active compounds (abst.), 6,
74: On the decomposition of compounds optically inactive by
compensation (abst.), 6, 90
JUNGFLEISCH, E., and E. Léger. Researches on the optical isomers
of cinchonine (abst.), 10, 80
Jutz, G. W. Monochlorocinnamic acid (abst.), 5, 22
KACHLER, J. Compounds of the camphor group (abst.), - 2, 179

KADE, R. Action of chlorine on dibenzyl (abst.), 1, 497
KAEHLER, M. Improved filter-disk, 16, 58
KAEMMER, G. Determination of tartaric acid in crude tartar, argols,
etc. (abst.), 7, 88
Kahlenberg, L. Speed of reduction of ferric chloride by stannous
chloride, 16, 314
KALISCHER, S. Molecular structure of the metals (abst.), - 5, 21
KALMANN, W. Standardizing iodine solutions (abst.), 8, 200: See
also Oser, J.
KANERA, F. See Horbaczewski, J.
KASSNER, G. Elementary analysis of volatile carbon compounds
(abst.), 9, 220
KATHREINER, F. Determination of tannin (abst.), - 1, 102
Kauffmann, G. $\beta$ -naphtholaldehyde (abst.), 5, 23
KAWAKITA, M. See Divers, E.
KAYSER, R. Estimation of tartaric acid in wine (abst.), - 6, 97
KEBLER, L. F. Acidimetric estimation of vegetable alkaloids, 17, 822:
Improvements on Dr. Squibb's volumetric method for estimating
acetone, 19, 316
KEDZIE, R. C. Mineral residues in sprayed fruit, 16, 71
KEGEL, O. See Zincke, T.
KEHRMANN, F. Substitution dependent on atomic and molecular
magnitude, etc. (abst.), 12, 167
KEISER, E. H. See Remsen, I.
Kelbe, W. Expulsion of the sulpho group by bromine (abst.), - 4, 175
Kelbe, W., and J. Lwoff. Methyl alcohol obtained by dry distillation
of colophony (abst.), 5, 123
Kelbe, W., and C. Warth. Capronic acid occurring in resin oil (abst.), 4, 228
Keller, E. Distribution of the precious metals and impurities in
copper and suggestions for a rational mode of sampling, 19, 243:
Notes on selenium and tellurium, 19, 771: Tank residues in elec-
trolytic copper refineries, 19, 778
KELLER, H. A. See Keller, H. F.
Keller, H. F. Symmetrical tetrabronidiacetyl (abst.), 12, 160: The
analysis of American refined copper, 16, 785: Recent contributions
to our knowledge of metallic reducing agents, 16, 833
Keller, H. F., and H. A. Keller. A new variety of kobellite, - 7, 194
Kelley, D. J. Malt wine, 19, (30)
Kelley, J., and E. F. Smith. Action of acid vapors on metallic sul-
phides, 18, 1096
KENDALL, J. A. Method of obtaining benzene from coal gas (abst.), 6, 175
KENT, W. H. A modified form of Soxhlet's extractor, 9, 182: Deter-
mination of fat in milk, 10, 32
KENT, W. H., and B. Tollens. Examination of lactose and galactose
(abst.), 7, 85
KERSHAW, J. B. C. Improved form of Orsat's apparatus for estima-
tion of oxygen (abst.), 6, 97

KESSLER, F. Method of determining manganese in alloys of iron
(abst.), 1, 83: Atomic weight of antimony (abst.), - 1, 320
KESTNER. See Scheurer-Kestner.
KIENLEN, P. Commercial analysis of bituminous rocks (abst.), 2, 432
KILGORE, B. W. Estimation of phosphoric acid by titration of the
yellow precipitate, 16, 765: Determination of phosphoric acid by
the molybdate-magnesia method, 16, 793: Determination of phos-
phorus by molybdate-magnesia method, and by volumetric method,
17, 941 : Estimation of phosphoric acid by titration, etc., 17, 950 :
Further communication on the volumetric estimation of phos-
phoric acid, 19, 703
KILIANI, H. On gum arabic (abst.), 4, 174: Preparation of lactic
acid (abst.), 5, 20: On saccharin (abst.), 5, 20
KILIANI, H., and S. Kleemann. Preliminary communication on cap-
rolactone (abst.), 6, 162
KINGZETT, C. T. Contributions to the history of putrefaction (abst.),
2, 343: Camphoric peroxide and barium camphorate (abst.), 6,
91: Comparative antiseptic values of chlorides, nitrates, and sul-
phates (abst.), <b>9</b> , 190: On the manufacture of chlorine, especially
by the use of magnesia (abst.), 10, 85
KINNEAR, J. B. Reduction of nitrates and nitrites to ammonia in
water analysis (abst.), 4, 163
KINNICUTT, L. P. Indirect determination of chlorine and bromine
(abst.), 4, 161: Recent work in England on the purification of
sewage, 20, 185
KIRCHER, G. See Müller, C. L.
KISCH, W. See König, J.
KISSLING, R. Methods for determining nicotine in tobacco (abst.), 4, 195
KJELDAHL, J. Determination of nitrogen in organic bodies (abst.), 5, 243
Klason, P. Apparatus for preparing chlorine (abst.), - 12, 155
KLEEMANN, S. See Kiliani, H.
KLEIN, D. Borotungstates (abst.), 2, 432: Mucates and saccharates
analogous to sodium antimonyl tartrate (abst.), 6, 35: Tellurous
anhydride and its combinations with acids (abst.), - 8, 163
KLEIN, F. Determination of potassium acid tartrate in argol, etc.
(abst.), 7, 295
KLEIN, J. Constitution of desoxalic acid (abst.), 2, 291: Use of am-
monium thiocarbamate in analyses (abst.), 9, 115
KLEIN, L. Determination of carbon in cast iron (abst.), 1, 88
KLEINERT, Dr. On the estimation of phenol in creosote oil (abst.), 6, 38
KLEMP, G. Valuation of zinc dust (abst.), 12, 503
KLIEBHAN, G. Analysis of different varieties of coals (abst.), 9, 198:
Preparation of crystallized chromic acid from lead chromate (abst.), 9, 222
KLINGER, A., and A. Bujard. Adulteration of split peas (abst.), - 9, 38
KLOOZ, O. T. See Mabery, C. F.
KLOPSCH, R. Determination of fat in oil cake (abst.), - 10, 157
KNAPP, F. Ultramarine blue from silica by use of heat (abst.), - 7, 172

KNECHT, E. New isomer of orcinol (abst.), 4, 227
KNÖFLER, O. Volumetric determination of alkaline earths and sul-
phuric acid combined with them (abst.), 7, 251
phuric acid combined with them (abst.), 7, 251 KNOENVAGEL, E. Preparation of dry diazo-salts (abst.), - 12, 475
KNOP, A. Action of phosphorus pentasulphide on aniline (abst.), 10, 40
KNOP, W. Determination of potassium and sodium in silicates (abst.), 1, 536
KNORR, A. E. Modified method of fine silver assay, 19, 814: Some
new forms of apparatus, 19, 817
KNORR, L., and A. Blank. Action of ethyl acetobenzalacetate on
phenylhydrazine (abst.), 8, 55
KNOX, J. W. T., and A. B. Prescott. The caffein compound in kola,
19, 63: The caffeine compounds in kola. II. Kolatannin, 20, 34
KNYRIM, M. See Zimmermann, J.
Kobbé, K. See Seubert, K.
Koch, H. See Fischer, E.
Köbig, J. Constituents of oil of Roman camonile (abst.), - 1, 238
Köchlin, P. See Heumann, K.
KÖHLER, H. Apparatus for determination of solubilities (abst.), I,
375: Components of essential oils of some Ericaceae (abst.), - 1, 395
KÖHNLEIN, B. Preparation of paraffins (abst.), - 5, 130
KÖLLIKER, A. See Wallach, O.
KÖNIG, F. Preparation of succinic acid from tartaric acid by fermen-
tation (abst.), 4, 205 König, J. Determination of oxygen dissolved in water (abst.), 2, 172
König, J. Determination of oxygen dissolved in water (abst.), 2, 172
KÖNIG, J., and W. Kisch. Analysis of commercial peptones (abst.), 11, 55
KÖNIGS, W. Oxidation products of cinchonine (abst.), 1, 166: Action
of phosphorus pentachloride, etc., on cinchonine chloride (abst.),
2, 227 : See also Hoffmann, L.
KÖRNER, G. See Fischer, O.
KÖRNER, M. See Weddige, A.
KOETTSTORFER, J. New method of testing butter for foreign fatty
bodies (abst.), 1, 359, 567
Kohn, O. See Nölting, E.
Kolbe, H. Composition and basicity of hyposulphuric acid (abst.),
1, 497: Constitution of isatin (abst.), 7, 57, 173: Preparation of
anthranilic acid (abst.), 7, 60
KONINCK, L. L. DE. See De Koninck, L. L.
Koningh, L. DE. See De Koningh, L.
Kopp, H. Acids obtained in saponification of oil of Roman camomile
(abst.), 1, 238
KOPPESCHAAR, W. F. Composition and analysis of commercial qui-
nine sulphate (abst.), 7, 226
Kossel, A. New base found in the animal body (abst.), - 7, 175 Kostanecki, S. von. See Liebermann, C.
KOSTANECKI, S. VON. See Liebermann, C.  KOUZNETZOFF. Analysis of rotschouberite (abst.), 6, 78
KOWALEWSKY, N. Uranium acetate as reagent for albuminoids
(abst.) 7, 201

KRAEMER, G., and A. Spilker. Synthesis of chrysene and related
hydrocarbons (abst.), 12, 160: Cumarone of coal tar (abst.), 12, 162
KRAMER, M. Determination of acetone in wood spirit (abst.), - 4, 196
KRATSCHMER, F. Use of sodium bromate in volumetric analysis
(abst.), 7, 296: Apparatus for determination of nitric acid (abst.), 9, 217
KRAUSE, A. Paraphenylenediamine (abst.), 1, 162: Note on the
diamond (abst.), 12, 472
KRAUSE, H., and G. Salomon. Formation of xanthine bases from
egg-albumin (abst.), 1, 165 KRAUSE, O. H. Joseph Goldmark, an obituary, 4, 7
KRAUT, K. Belladonnine (abst.), 2, 173: On tropine (abst.), - 4, 264
KRESSNER, M. G. See Dietzell, B. E.
KREUSLER, U. Apparatus for reducing measured volumes of gas to
normal conditions (abst.), 6, 97: Digestion furnace for Kjeldahl
nitrogen determinations (abst.), 7, 291
KREUSLER, U., and P. Henzold. Alkaline reaction of glass, a source
of error in analysis (abst.), 6, 97
KRÜGER P. Derivatives of benzenylamidoxime (abst.), 8, 75
KRÜSS, G. Decomposition of nickel and cobalt (abst.), - 10, 180
KRUSS, G., and H. Moraht. Beryllium (abst.), 12, 154: Researches
on beryllium (abst.), 12, 472
KRUSS, G., and K. Ohnmais. Vanadium sulpho salts (abst.), - 12, 472
KRUG, W. H. Some characteristics of California wines, 16, 597: De-
termination of tannin by metallic oxides, 17, 811: Recalculation
of Wein's table of starch equivalent to copper, 19, 452
KRUG, W. H., and J. E. Blomén. Commercial preparation of nitro-
naphthalenes, 19, 532
KRUG, W. H., and H. W. Wiley. Solubility of the pentosans in the
reagents employed in the estimation of starch, 20, 266
KRUG, W. H. See Wiley, H. W.
KRUTWIG, J. Detection of silver in metallic lead (abst.), 4, 168: Sepa-
ration of iodine and chlorine in the dry way (abst.), - 7, 32
KUBEL, W. Basic magnesium acetate (abst.), 5, 19
KUHN, B., and O. Saeger. Quantitative determination of arsenic by
Marsh's test: action of potassium hydroxide on arsine (abst.),
12, 353; 12, 477
12, 353; 12, 477
KUHARA, M. Method for estimating bismuth volumetrically (abst.), 2, 43 KUHLMANN, E., Jr. Explosion of a platinum retort used for concentration of sulphuric acid (abst.), 2, 130
KUHARA, M. Method for estimating bismuth volumetrically (abst.), 2, 43 KUHLMANN, E., Jr. Explosion of a platinum retort used for concen-
KUHARA, M. Method for estimating bismuth volumetrically (abst.), 2, 43 KUHLMANN, E., Jr. Explosion of a platinum retort used for concentration of sulphuric acid (abst.), 2, 130 KUHN, O. Detection and estimation of arsenic, sulphur, phosphorus, and other elements, in native copper (abst.), 6, 241
KUHARA, M. Method for estimating bismuth volumetrically (abst.), 2, 43 KUHLMANN, E., Jr. Explosion of a platinum retort used for concentration of sulphuric acid (abst.), 2, 130 KUHN, O. Detection and estimation of arsenic, sulphur, phosphorus, and other elements, in native copper (abst.), 6, 241 KULISCH, P. Modification of the Kjeldahl method (abst.), - 8, 81
KUHARA, M. Method for estimating bismuth volumetrically (abst.), 2, 43 KUHLMANN, E., Jr. Explosion of a platinum retort used for concentration of sulphuric acid (abst.), 2, 130 KUHN, O. Detection and estimation of arsenic, sulphur, phosphorus, and other elements, in native copper (abst.), 6, 241 KULISCH, P. Modification of the Kjeldahl method (abst.), - 8, 81 KUPFERSCHLÄGER, I. On the existence of phosphoric acid in ammo-
KUHARA, M. Method for estimating bismuth volumetrically (abst.), 2, 43 KUHLMANN, E., Jr. Explosion of a platinum retort used for concentration of sulphuric acid (abst.), 2, 130 KUHN, O. Detection and estimation of arsenic, sulphur, phosphorus, and other elements, in native copper (abst.), 6, 241 KULISCH, P. Modification of the Kjeldahl method (abst.), - 8, 81
KUHARA, M. Method for estimating bismuth volumetrically (abst.), 2, 43 KUHLMANN, E., Jr. Explosion of a platinum retort used for concentration of sulphuric acid (abst.), 2, 130 KUHN, O. Detection and estimation of arsenic, sulphur, phosphorus, and other elements, in native copper (abst.), 6, 241 KULISCH, P. Modification of the Kjeldahl method (abst.), - 8, 81 KUPFERSCHLÄGER, I. On the existence of phosphoric acid in ammo-

KUTSCHEROFF, M. G. Action of hydrocarbons of the acetylene group
on mercuric oxide and salts (abst.), 6, 93: Action of allylene on
mercuric oxide and salts (abst.), 6, 167
KUZEL, H. See Fischer, E.
LAAR, C. Contribution to the knowledge of sulphanilic acid (abst.),
2, 291: Use of diphenylamine and aniline in qualitative analysis
(abst.), 5, 52
LA BELLONE, F. DE. Process for the medico-legal detection of blood
(abst.), 10, 88
LACHOWICZ, B. Action of phosphorus chlorides on phenanthra-quinone (abst.), 5, 69.
none (abst.), 5, 69.  LA COSTE, W. Behavior of addition products of quinoline and mana-
haloid alkyl derivaties towards silver oxide (abst.), 4, 206: Halo-
gen derivatives of quinoline (abst.), 4, 268: The bases produced
from the products of addition of quinoline and halogenalkyls
(abst.), 5, 23
LA COSTE, W., and J. Bodewig. Methylformyl-o-amidochlorbenzoic
acid and methyl-pseudo-chlorisatin from m-chlorquinolinemethyl-
chloride (abst.), 7, 229
LA COSTE, W., and F. Valeur. β-Quinolinedisulphonic acid (abst.), 10, 21
LADD, E. F. Investigations upon maize, 12, 369: The proteids of
cream, 20, 858: Humates and soil fertility, 20, 861.
LADENBURG, A. Artificial alkaloids (abst.), 2, 99: Tropidine (abst.),
2, 225: Hyoscyamine (abst.), 2, 225: Duboisine (abst.), 2, 224:
Contributions to the history of atropine (abst.), 4, 176: Behavior
of diamines with nitrous acid (abst.), 6, 162: Synthesis of piperi-
dine (abst.), 6, 162: On the synthesis of piperidine and its homologues (abst.), 7, 86
logues (abst.), 7, 86- LADENBURG, A., and G. Meyer. Upon daturine (abst.), - 2, 370
LADENBURG, A., and C. F. Roth. Studies on commercial picoline
(abst.), 7, 146-
LADENBURG, A., and L. Rügheimer. Artificial formation of tropic
acid (abst.), 2, 370
LADUREAU, A. Phosphoric acid in soils of north of France (abst.), 4, 77
LAFONT, J. Action of crystallizable formic acid on citrenol (abst.),
10, 113: See also Bouchardat, G.
LAIBLIN, R. Nicotine and nicotinic acid (abst.), 2, 55
LAJOUX, H. On woman's milk (abst.), 9, 113: See also Grandval, A.
LAN, C. Effects of compression on hardness of steel (abst.), - 4, 235
LAND, W. J. Mica scale-pans, P. 1, 126: Determination of carbonic
acid by loss of weight, P. I, 127
LANDAUER, J. Spectra of salts of saffranine (abst.), 1, 374
LANDIS, E. K. Determination of phosphorus (Note), 15, 480: Indirect analysis of mixtures containing a common constituent, 17,
466: Indirect analysis, 18, 182: Standard iodine solution for sul-
phur determinations, 19, 261
LANDOLPH, F. Action of boron fluoride on acetone (abst.), 1, 400:

Determination of fluorine and boron in organic compounds
(abst.), I, 543: Anethol derivatives (abst.), 2, 171
LANDOLT, H. Solid carbon dioxid (abst.), 6, 307: Some laboratory
apparatus (abst.), 7, 150: Polaristrobometric analysis, - 11, 59, 80
LANDSBERG, L. See Baeyer, A., and Erlenmeyer, E.
LANE, N. J. Muter's method for analysis of fats and oils, 15, 110:
Determination of sulphuric acid, 18, 682
LANGBECK, H. W. Bitter principle in fermented liquors brewed
without hops (abst.), 1, 363
LANGENBECK, K. Chemistry of the pottery industry of the United
States, 15, 651, 695
LANGLEY, J. W. Explanation of Gladstone and Tribe's "2/3 law in
chemical dynamics" (abst.), 7, 26: Work of the committees on
the "international standards for analysis of iron and steel," 15,
448: The use of electrolysis in technical chemical processes - 16, 49
LANGWORTHY, C. F. A respiration calorimeter: abstract of descrip-
tion by Professors Atwater and Rosa, 20, 681
LAPRAIK, W. See Russell, W. H.
LASNE and Benker. Reduction of loss of nitric acid in manufacture
6 11 1 1 11 11 11
LA SOURCE, M. DE. Influence of plaster of Paris on composition and
chemical characters of wine (abst.), 6, 104 LATSCHINOFF, P. Isocholic acid (abst.), 5, 21: Empirical formula of
cholic acid (abst.), 10, 37 LAUBENHEIMER, A. On orthodinitro compounds (abst.), - 4, 269
LAUER, W. E. See Gabriel, S.
LAUR, P. Reduction of silver ores by hydrogen in the wet way
LAWES, Sir J. B., J. H. Gilbert and R. Warington. On the chemistry
of "fairy rings" (abst.), 5, 102
LAWLER, C. J. New aspirator, 5, 71 LAWSON, J. A. Action of diazo-compounds on $\beta$ -naphthylamine
(abst.), 8, 22
LAZARUS, M. J. On fractional distillation in a current of steam
(abst.), 7, 251 LE BEL, J. A. Dextrogyric amyl alcohol (abst.), 1, 273: Active
methylpropylcarbinol and various fungi which destroy it (abst.), 2, 132
LE Bon, G. Employment of powdered borax for preservation of meat
(abst.), 1, 173: Two new antiseptics (abst.), 4, 242
LECHARTIER, G. Determination of phosphoric acid in soils (abst.), 6, 194
LE CHATELLIER, H. Decomposition of cements by water (abst.), 6,
174: On the decomposition of salts by water (abst.), 7, 140: On
the oxidation of silver (abst.), 7, 140: On
LECOQ DE BOISBAUDRAN, P. E. Atomic weight of palladium (abst.),
1, 320: Researches on samarium (abst.), 1, 401: Separation of
gallium from iron and zinc (abst.), 4, 168: Separation of gallium
gamum from from and zine (abst.), 4, 100: Separation of gamum

(abst.), 4, 237, 238, 239, 240, 242, 273: Crystallized oxychloride of gallium (abst.), 4, 233: Separation of gallium (abst.), 5, 118: Alloys of indium and gallium (abst.), - - - 7,

LECRENIER, A. See Koninck, L. L. de, and Spring, W.

Lee, C. T. Method for assay of indigo, - - - 6, 185

LEEDS, A. R. Water analysis, P. 2, 1: Determination of nitric acid by transformation into ammonia, P. 2, 9, 13: Alkalinity or acidity of potable waters, P. 2, 71: Presence of nitric acid in healthy urine, and accurate determination of, P. 2, 98: Alteration of standard ammonium chloride solution when kept in the dark, P. 2, 147: Titration of hydrochloric acid for chlorine, and of sulphuric and nitric acids for hyponitric acid, P. 2, 149: Determination of nitrates, P. 2, 150: Action of potassium permanganate upon oxalic acid, P. 2, 153: Temperature and volume in generation of ozone, and new form of ozonator, 1, 8: Titration of hydrochloric acid for chlorine, and of sulphuric and nitric acids for hyponitric acid, 1, 18: Detection of traces of water in alcohol, 1, 38: Influence of light upon the decomposition of iodides, 1, 65: Detection and estimation of nitrous acid in potable waters, 1, 136: Ammonium nitrite and by-products obtained in ozonization of air, 1, 145: Solubility of ozone in water, 1, 220: Action of ozone on coloring-matter of plants, 1, 228: Bleaching of sugar syrups by ozone, 1, 229: Reduction of carbon dioxide by phosphorus at ordinary temperatures, 1, 230: Oxidation of carbon monoxide by air over phosphorus at ordinary temperatures, 1, 232: Notes on ozone, 1, 431: Peroxide of hydrogen and ozone, 2, 34, 247: Action of light and darkness on standard ammonium chloride and tannin solutions, 2, 246: Action of light on the soluble iodides, with the outlines of a new method of actinometry, 2, 249: Laws governing the decomposition of equivalent solutions of the iodides under the influence of actinium, 2, 270: Action of hyponitric anhydride on organic bodies, 2, 277, 416: Production of ozone by heating substances containing oxygen, 2, 411: Production of ozone, hydrogen peroxide and ammonium nitrate in ozonation of air by phosphorus, 3, 5: Action of oxygen, ozone, and nascent oxygen upon benzene, 3, 16: Direct conversion of aromatic amides into their corresponding azo-compounds, 3, 39: Adulteration of food, drink, and drugs, from the chemist's standpoint, etc., 3, 60: Relative purity of city waters in United States, 3, 98: Compounds of aromatic bases with metallic salts, with a note on thiocarbanilide, 3, 134: Reduction of metallic oxides in sunlight, 4, 3: Diphenylamineacrolein, 4, 32: Acrolein urea, 4, 58: Contamination of the New York water supply, 4, 127: Xylidine-acrolein, 5, 1: Oenanthol-aniline, oenantholxylidine, and oenanthol-naphthylamine, 5, 2: Solid residue from the distillation of castor oil in vacuo, 5, 4: Cryptidine, 5, 7: Acrolein-urea, with remarks upon Schiff's publications upon condensed ureas, 5, 36: Analysis of soap, 5, 44: Oenanthalaniline,

8, 198

oenanthalxylidine, and oenanthalnaphthylamine (abst.), 5, 66: Cryptidine (abst.), 5, 67: Platinum iodide as a reagent for deleterious organic substances in potable waters, 5, 74: Conversion of carbon monoxide to carbon dioxide by nascent oxygen, 5, 78: Atomation of oxygen, 5, 205: Benzureide, 6, 15: Atomation of oxygen at elevated temperatures, and burning of pure hydrogen and hydrocarbons in pure air, 6, 17: Estimation of organic-matter according to methods depending on reduction of permanganate (abst.), 6, 41: Physical and chemical analysis of flour, 6, 56: Composition and methods of analysis of human milk, 6, 252: Present and proposed future water supply of the city of Albany, N. Y., 7, 261: Water supply of Philadelphia, 8, 126: Actinic method for the determination of organic matter in water, 8, 269: Method of separation of coloring-matter in butter, etc., 9, 76, 98: The pollution of the water supply of Jersey City and Newark, 9, 81: The epidemic of typhoid fever at Mt. Holly, N. J., in 1887, 9, 146: Determination of carbon and nitrogen in waters, 9, 162: The aeration and composition of Niagara river water, 12, 449: The composition of swill milk, 12, 451: Chemical and physical changes attendant upon sterilization of milk, 13, 34: Proteids of cow's milk, 13, 72: Estimation by titration of carbon dioxide in water, 13, 98: Precipitation of suspended clay by aluminic, ferric, and calcic hydroxides, 13, 100: Are chemists prepared to abandon Clark's method for estimation of hardness in water, 13, 114; Acetic acid in vinegar, 17, 741: Standard prisms in water analysis, and the valuation of color in potable waters, 18, 484; Bacteria in milk-. . . . . - -- 18, 687 sugar, LEEDS, A. R., and E. Everhart. Action of water and of argentic hydrate upon benzene hexachloride and naphthalene tetrachloride, 2, 205: Method for analysis of mustard, - -3, 130 LEFÈVRE, L. See Grimaux, E. LEFFMANN, H., and W. Beam. Effects of food preservatives on the action of diastase (abst.), - - - -L'HOTE, L. Preparation of vanadyl chloride (abst.), 8, 71: See also Girard, C. LÉGER, E. See Jungfleisch, E. LEHNE, A. Condensation of benzhydrol and naphthalene, - 2, 369 LELLMANN, E. Diphenylamine and paraditolylamine (abst.), 5, 24: New class of amidines (abst.), 5, 24: Naphthalene derivatives (abst.), 6, 87: New toluylenediamine (abst.), 7, 174: Constitution of the three dinitro-p-xylenes (abst.), 7, 175: Methods for determining the constitution of aromatic diamines (abst.), - - 7, 174 LELLMANN, E., and E. Würthner. New nitrotoluidine (abst.), LEMOINE, G. New sulphur salts from phosphorus trisulphide (abst.), 6, 76: Hydrocarbons and higher alcohols obtained from American

petroleum (abst.), 6, 95: Reaction between ferric salts and oxalic

acid (abst.),

Lenher, V. Sulphiodide of lead, 17, 511: Atomic mass and deriva-
tives of selenium, 20, 555
LENHER, V., and E. F. Smith. Ammonium selenide, 20, 277
LENHER, V. See also Rising, W. B., and Smith, E. F.
Lenken, C. Discovery of cocaine (abst.), 7, 88
LENZ, W. Certain titrations with potassium permanganate (abst.),
7, 90: Examination of indigo colors (abst.), 9, 120
LEONARD, N. Coloration of a coal fire by common salt (abst.), - 10, 179
LEPEL, F. von. Universal stand for pocket spectroscope (abst.),
1, 379, 397: Detection of juice of red beets and coloring-matter of
red poppies, in wine (abst.), 1, 578
LEPINE, R., L. Eymonnet, and P. Aubert. The proportion of im-
perfectly oxidized phosphorus in urine (abst.), 6, 129
LEPLAY, H. Studies on the sugar beet (abst.), 5, 118, 119:
Studies on corn (abst.), 5, 120
LEPSIUS, B. Action of the arc light on gases (abst.), - 12, 351
LERMONTOFF, J. Action of tertiary butyl iodide upon isobutylene in
presence of metallic oxides (abst.), 2, 54
LE ROY, G. A. Detection of free chlorine in hydrochloric acid (abst.), 12, 73
LEROY, M. Action of amides on bromacetophenones (abst.), - 9, 195
LESCOEUR, H., and A. Rigaut. Solid cyanogen hydride (abst.), 1, 402
LEUCKART, R. Reaction of isomeric monobromcinnamic acids with
concentrated sulphuric acid (abst.), 4, 173: A few reactions of
aromatic cyanates (abst.), 8, 55
LEVALLOIS, A. Action of solutions of cellulose on polarized light
(abst.), 6, 93
LEVINSTEIN, I. Quantitative determination of o-, m-, and p-xylene
(abst.), 6, 101: Xylenes from English and Scotch tars (abst.), 7, 89
LEVOIR, L. C. Artificial asbestos, or French chalk, for packing and
closing leakages (abst.), 7, 214
Lewes, V. Experiments on potassium tetra- and pentathionate
(abst.), 4, 224
Lewes, V. B. See Cowper, R.
Lewkowitsch, J. Preparation of nitro acids of fatty series (abst.), 2, 291
LIDDLE, T. See Smith, W.
LIDOFF, A. Solubility of aniline in solutions of its salts (abst.), 6, 96
LIEBEN, A. Density of chlorine at high temperatures, 1, 453
LIEBERMANN, C. Anthracene compounds of chrysazine series (abst.),
1, 290: Reduction of anthraquinonesulphonic acid (abst.), 1, 291:
Exsiccator for solutions in ether, chloroform, benzene, etc. (abst.),
1, 585 : Azoanthrol dyes (abst.), 4, 266 : Isocinnamic acid present
in the alkaloids accompanying cocaine (abst.), 12, 161
LIEBERMANN, C., and A. Bischof. The third anthracenecarboxylic
acid (abst.), 2, 95
LIEBERMANN, C., and A. Bollert. Anthramine (abst.), - 4, 207: 5, 25
LIEBERMANN, C., and O. HÖRMANN. Coloring-matters and glucoside
sugar of Persian berries (abst.), 2, 62

LIEBERMANN, C., and S. von Kostanecki. On p-azocresol (abst.), 6, 161
LIEBERMANN, C., and M. VÖLTZKOW. Phenyl mustard oil glycolide
(abst.), 2, 226
LIEBERMANN, I. Action of bone black on salts (abst.), 1, 95: Solu-
bility of sulphur in acetic acid (abst.), 1, 99: Spectrum of fuch-
sine (abst.), 1, 578: Determination of sulphurous acid in wines
(abst.), 4, 192: Products of dry distillation of tartaric acid (abst.),
4, 263: Apparatus for determination of melting-point of alloys
(abst.), 4, 263: Sulphurous acid in wine (abst.), 4, 263: Detection
of sulphurous acid in wine (abst.), 4, 263
LIEBMANN, A. Synthesis of cumene (abst.), 2, 95: Synthesis of
homologues of phenol (abst.), 4, 205
Liebschütz, M. Examination of butter, 7, 134: Determination of
metallic zinc in zinc dust, 7, 136
LIECHTI, L., and W. Suida. Properties of certain salts of iron and
aluminum with reference to their use in dyeing (abst.), 6, 172: On
aniline black (abst.), 7, 63 LIEPMANN, H. See Fittig, R.
LIGHTFOOT, T. M. Study of the chemical behavior of arsenopyrite, 16, 624
LINDEMANN, O. Volumetric determination of vanadic acid (abst.),
1, 97: Estimation of free oxygen by means of phosphorus (abst.), 1, 372
LINDET, L. Combinations of auric chloride with sulphur and sele-
nium tetrachlorides (abst.), 8, 20: New solvents of anhydrous auric
chloride (abst.), 8, 34: Ethereal chloraurophosphites (abst.), - 8, 276
LINDO, D. Gravimetric determination of chlorine (abst.), 4, 161:
Estimation of phosphoric acid as magnesium pyrophosphate
(abst.), 5, 243: Estimation of phosphoric acid in fertilizers (abst.), 6, 241
LINDSAY, W. B. See Storer, F. H.
LINDSEY, J. B. Value of leather refuse, 18, 565
LINEBARGER, C. E. Disulphotetraphenylene, 13, 270: Experiments
in the anthracene series, 17, 354: Reaction between zinc sulphate
and potassium hydroxide, 17, 358: Vapor-tensions of mixtures of
volatile liquids, 17, 615, 690: Formation of layers in mixtures of
acetic acid and benzene, 17, 932; Determining the molecular
masses of liquids by means of their surface-tensions, 18, 514: Sur-
face-tensions of aqueous solutions of oxalic, tartaric, and citric
acids, 20, 128: Speed of coagulation of colloid solutions, 20, 375:
See also Delafontaine, M.
Link, W. See Römer, H.
LINTNER, C. Nitrogenous constituents of barley and malt (abst.), - 6, 173
Linton, Laura A. Technical analysis of asphaltum, - 16, 809; 18, 275
LIPPMANN, E., and F. Fleissner. On azylines (abst.), 5, 52
LIPPMANN, E., and J. Hawliczek. Eikosylene (abst.), - 1, 164
LIPPMANN, E., and W. Strecker. On amylideneaniline (abst.), 1, 164:
Nitrocuminol and its derivatives (abst.), 1, 164
LIPPMANN, E., and G. Vortmann. Compounds of nickelous and
cobaltous chlorides with tar bases (abst.), 1, 165

LIPPMAN, E. O. VON. Reducing substance occurring in raw beet
sugar (abst.), 10, 38
LIVACHE, A. Oxidation of oils (abst.), 8, 106
LIVERMORE, W. R. The perissad law, 12, 426
LIVERSIDGE, A. Specific gravities of some gem stones, 16, 205
Livon, C. See Caillol de Poncy, O.
LLOYD, F. J. Determination of reverted phosphoric acid (abst.),
4, 164: Estimation of reverted phosphotic acid (abst.),
phosphates and superphosphates (abst.), 6, 244
LOCHERT, H. Combination of glycol with aldehydes (abst.), 9, 172:10, 18
LOCKYER, J. N. Discussion of working hypothesis that the elements
are compound (abst.), 1, 113: Note on the spectrum of sodium
(abst.), 1, 373
LODTER, W. See Bamberger, E.
LOEB, M. Molecular weight of iodine in its solutions (abst.), 10, 155:
Use of aniline as an absorbent of cyanogen in gas analysis (abst.),
10, 156: Use of the Gooch crucible as a silver voltameter, 12, 300:
Apparatus for delineation of curved surfaces, *13, 263
LÖSCH, A. Determination of alkaloids in plants (abst.), 1, 548
LÖSEKANN, G. Behavior of alkaline solutions of aluminum hydrox-
ide towards hydrogen sulphide (abst.), 1, 163, 334
LOEW, O. Source of hippuric acid in urine of herbivorous animals,
(abst.), 1, 493; 2, 138: Synthetic preparation of formic acid
(abst.), 2, 368: Preparation of a very active platinum black
(abst.), 12, 154: The alterations of preserved milk (abst.), 5, 28:
Formation of nitrous acid and ammonia from free nitrogen (abst.),
12, 350: Decomposition of ammonium nitrite by means of plati-
num sponge (abst.), 12, 473
LOEW, O., and T. Bokorny. Reducing properties of living protoplasm
(abst.), 5, 20
Löw, W. Indigo dicarboxylic acid (abst.), 8, 51
LOEWENSTEIN, H. See Norton, T. H.
Lohse, O. Oil gas in the blast lamp (abst.), I, 91
LOIR, A. Double chemical function of monobasic organic acids (abst.), 1, 489
LOMBARD. Chemical and therapeutical study of salol (abst.), - 9, 197
Long, J. H. Observations on American menthol, 14, 149: Chemical
notes from the Columbian Exposition, 15, 250, 312: Observations
on American oil of turpentine, 16, 844: Precipitation of antimony
from solutions of potassium antimonyl tartrate, 17, 87: Professor
Mark Powers (obituary), 17, 586: Lothar von Meyer (obituary),
17, 664: On the inversion of sugar by salts, 18, 120, 693: Forma-
tion of antimony cinnabar, 18, 342: Lavoisier memorial (Note),
19, 170: Speed of reduction of ferric alum by sugar, - 19, 683
Longi, A. Estimation of nitric acid in the presence of other acids
(abst.), 6, 239: Volumetric determination of nitric acid (abst.), 7, 61
Longmore, J. Cotton-seed oil (abst.), 8, 206
Longuet. Detection of spermatic fluid (abst.), - 1, 557
1, 55/

LORD, N. W. Neutrality of ammonium citrate solution, 18, 457 LORIN. Action of oxalic anhydride on sugars (abst.), 1, 100 LOSANITCH. S. M. Action of nitric acid upon diphenylguanidine chloride (abst.), 1, 489: Action of carbon bisulphide on p-nitrani- line (abst.), 4, 264: Action of nitric acid on tribromaniline (abst.), 4, 265: Direct replacement of amido-group in aromatic amines by
halogens (abst.), 7, 119 LOUGUININE, W. Heat of formation of isomeric and homologous compounds (abst.), 6, 36: Heat of combustion of some ketones and of two ethereal carbonates (abst.), 6, 90: Heats of combustion of fatty acids and their derivatives (abst.), 8, 183: See also Berthelot, M.
Louise, E. A new hydrocarbon (abst.), 5, 121: Action of anhydrous aluminum chloride upon acetone (abst.), 5, 117: An aromatic diacetone (abst.), 6, 134: Phenylmesitylenecarbinol and its prin-
cipal ethers (abst.), 8, 53
LOVETT, W. J. Examination of gases escaping from chemical works
(abst.), 4, 161 LOVIBOND, J. W. The tintometer (abst.), 10, 115
LOVIBOND, J. W. The tintometer (abst.), 10, 115
Loviton, [M]. Method for taking the fusion and solidification points
of neutral fatty bodies and of their acids (abst.), 8, 65
Low, A. H. Technical estimation of lead, 15, 548: Copper assay by
the iodide method, 18, 458: Device to prevent loss from spatter-
ing, 20, 233: Testing for a yellow azo-color in fats, etc., - 20, 889
Lowe, G. See Sienier, A.
Lowe, J. Separation of bismuth from copper (abst.), - 5, 244  Lubavin, N. Analysis of a phosphorite from Nijni Novgorod (abst.), 6, 158
LUCIEN, J. Incineration of sugars and of sirups without sulphuric
acid (abst.), 12, 18
Lucossier, G. Spectroscopic detection of blood (abst.), - 10, 88
Ludwig, R. See Classen, A.
LUDEKING, C. Analysis of the barium group (abst.), 12, 501: See
also Wheeler, H. A.
LUFF, A. P. See Roberts, W. C.
LUNGE, G. Normal percentage of sulphuric acid in wine (abst.), 1,
365: Action of sulphur dioxide on nitric oxide (abst.), 4, 72:
Study of reactions for production of soda by new methods (abst.),
4, 75: Behavior of nitrogen tetroxide with sulphuric acid (abst.),
4, 265: On the existence of nitrous anhydride in form of vapor
(abst.), 4, 266: The titration of sulphurous acid (abst.), 6, 26:
The action of soda, lime, and magnesia on the salts of ammonia
and organic amines, etc. (abst.), 6, 27: The gasvolumeter (abst.),
12, 475: Apparatus for promoting the interaction of liquids and
gases, 15, 361: Education of industrial chemists, 15, 481: Estima-
tion of sulphur in pyrites, 17, 181, 772; 18, 685
LUNGE, G., and J. H. Smith. The oxidation of the sulphur com-
pounds occurring in the manufacture of caustic soda (abst.) - 6. 28

LUNGWITZ, E. See Schweitzer, H.
LUPTON, N. T. Effects on butter from feeding cotton-seed food,
13, 134: Effect of decomposing organic matter upon natural phos-
phates, 14, 353
Lux, F. Detection of fatty oils when mixed with mineral oils (abst.),
7, 226; 8, 39
LWOFF, J. Action of chlorine on isobutylene (abst.), 6, 95: See also
Kelbe, W.
Lyte, F. M. See Maxwell-Lyte, F.
Maas, P. See Smith, E. F.
MABEN, T. Apricot, peach, and walnut oils (abst.), 8, 184: See
Dechan, M.
MABERY, C. F. How chemistry is best taught, 15, 463: Examination
of the atmosphere of a large manufacturing city, 17, 105: Inaccura-
cies in the determination of carbon and hydrogen of combustion, 20, 510
MABERY, C. F., and L. Goldsmith. Influence of antiseptics on the
digestion of blood fibrin by pepsin in a hydrochloric acid solution, 19, 889
MABERY, C. F., and O. T. Klooz. Composition of American kaolins, 18, 909
MABERY, C. F. See also Robinson, A. E.
MACADAM, W. I. Manures, natural and artificial (abst.), - 10, 47
MACADAM, W. J. Composition of butyrellite (abst.), 9, 6
McCarter, H. G. See Sadtler, S. P.
McCay, L. W. Reduction of arsenic acid solutions (abst.), 7, 123:
Action of hydrogen sulphide on arsenic acid (abst.), - 10, 11
McCullock, N. Estimation of iodine (abst.), 10, 27 McElroy, K. P. Detection of salicylic acid in food, 16, 198: Con-
traction of aqueous solutions of acetone, 16, 618: Estimation of
iron and alumina in phosphates, 17, 260: See also Bigelow, W. D.
MCILHINEY, P. C. The iodine figure of rosin, 16, 56: New method of
analyzing fats and resins, 16, 275: The analysis of varnishes,
16, 344: Gantter's process for determining the iodine figure of
fats, 16, 372: The quantitative separation of rosin oil from min-
eral oils, 16, 385: Method of determining the Koettstorfer figure
of dark-colored substances, 16, 408: Device for weighing oil for
analysis, 16, 882: The Cassel-Hinman gold and bromine process,
18, 451, (61): Method for determining the resistance of electro-
lytes, 20, 206
MCINTIRE, C. Solubility of arsenic trioxide in coffee decoctions, P. 1, 2, 56
MACIVOR, R. W. E. Analysis of acid water from Lake Hope (abst.), 9, 168
MCKENNA, C. F. Dr. Gideon E. Moore (obituary), - 17, 659 MCKERLIE, J. Milk ripener and purifier (abst.), - 8, 43
MCKERLIE, J. Milk ripener and purifier (abst.), 8, 43
MACKINTOSH, J. B. Determination of graphite in minerals (abst.),
7, 123: Action of hydrofluoric acid on silica and the silicates, - 8, 210
McLeod, H. Formation of ozone during slow oxidation of phos-
phorus (abst.), 2, 351: Evaporation in vacuo (abst.), 5, 235: De-
composition of potassium chlorate by heat in the presence of
manganese dioxide (abst.), 10, 187

McMurtrie, W. Opening address, Section of Technical Chemistry,
World's Congress of Chemists, 15, 545: Dr. Henry A. Mott (obit-
uary), 19, 90: Theodore A. Havemeyer (obituary), 19, 588: Some
records of recent progress in industrial chemistry (review), 19,
894: Some records of the year's progress in applied chemistry (re-
view), 20, 967
McPherson, W. See Weber, H. A.
McTaggart, J. R. See Noyes, W. A.
MÄHLY, J. See Friedländer, T.
MAERCKER, M. Reducing effect of different kinds of sugar on alka-
line copper solution (abst.), 1, 342
MAGATTI, G. Oxidation of substituted phenols (abst.), - 2, 223
MAGEE, W. H. See Dennis, L. M.
MAGULUNE, M. On the identity of dambose and inosite (abst.), - 9, 111
Mahon, R. W. Volumetric determination of zinc (abst.), 4, 166:
Estimation of phosphorus in steel, - 19, 792; 20, 429
MAILFERT. Researches on ozone (abst.), 4, 235, 237
MAISCH, H. See Gattermann, L.
MALLET, J. W. Production of magnesium nitride by smothered com-
bustion of magnesium in air, P. 1, 2, 17: Nitrogen iodide (abst.),
1, 112: An unusual case of electrolysis (abst.), 2, 223: Properties
of pure metallic aluminum, 4, 145: Fractional dehydration of am-
monium alum, etc., 4, 180 : Experiments upon alum baking pow-
ders, etc. (abst.), 10, 171
MALOT, C. Direct titration of phosphoric acid with uranium nitrate
(abst.), 9, 118
MANDEL, J. A. See Bourgougnon, A., and Friedburg, L. H.
MANN, C. Volumetric estimation of zinc (abst.), 1, 329, 535: Detec-
tion of citric acid (abst.), 7, 180
MAQUENNE, L. Action of ozone on manganese salts (abst.), 4, 234:
Preparation, properties, and constitution of inosite (abst.), 9, 103:
A few derivatives of saccharic acid and of mucic acid (abst.), 10,
17: See also Deherain, P. P., and Millot, A.
MARCANO, V. New platinum sulphocyanate (abst.), 2, 363
MARCKWALE, W. Furfuran derivatives (abst.), 9, 214: Trithioacet-
aldehydes (abst.), 9, 217: Formation of the quinoline ring, a
contribution to the benzene theory (abst.), 12, 234
MARIGNAC, C. DE. Review of Berthelot's "Mécanique Chimique," 2, 161
MARPMANN, G. Determination of water in milk (abst.), 4, 188
MARQUARDT, A. See Einhorn, A.
MARQUARDT, L. Determination of fusel oil in brandy (abst.), 5, 27,
50: New agent for thickening mineral lubricating oils (abst.), 8, 109
MARTIN, W. J. The cyanide method of extracting gold from its ores.
Application to assays, etc., 18, 309
MARTINON. Action of hydrogen dioxide on the oxides of chromium
(abst.), 8, 162
MARX. Arrangement for moving rider-weights (abst.), - 1,586

MASON, F. H. German economy in iron manufacture, 15, 284
MASON, W. P. "Water" results and the public, 9, 30: Drinking-
water and disease, 9, 44: Action of nitric acid on sugar, 9, 45:
Standardizing hydrometers, 9, 156: The United States gallon, 9,
186: On fatal poisoning by carbon monoxide, 10, 176: An alchem-
ical chart, 13, 293: Estimation of nitrates in water, 16, 71: Esti-
mation of chlorine in water, 16, 71: The phenolsulphonic acid
process for nitrates in water, 16, 72: Expert testimony, 16, 273:
Boric acid works at Larderelo, 16, 538: Notes on the hardening of
mortar, 16, 733: The quality of water supplies, 16, 772: Henry
Bradford Nason (obituary), 17, 339: Chemical versus bacteriologi-
cal examination of potable water, 18, 166: New bacteria counter, 20, 507
MASON, W. P., and J. W. Bowman. Loss of gold and silver during
scorification assay, 16, 313: Note on the test for strychnine, - 16, 824
Mason, W. P., and S. K. Hine. Note on the direct oxidation of or-
ganic matter in water, 14, 233
MASSON, O. Action of nitrous anhydride on glycerol (abst.), - 5, 233
MATHEWS, J. A. Phthalimide, 18, 679: Action of organic acids upon
nitriles, 20, 648 : See also Miller, E. H.
MATSUI, N. Raw materials used in Arita porcelain, 2, 315
MATTHEWS, F. F. Condensation products of aldehydes with ethyl
acetoacetate and substituted acetoacetates (abst.), 5, 101: See also
Claisen, L., and Hodgkinson, W. R.
MATTHEWS, J. M. Derivatives of the tetrachlorides of zirconium,
thorium, and lead, 20, 815: Derivatives of the tetrabromides of
zirconium and thorium, 20, 839: Preparation of zirconium nitrides
20, 843 : Separation of iron from zirconium, etc., 20, 846 : See also
Smith, E. F.
MAUMENÉ, E. J. Composition of slate (abst.), 2, 131: Synthesis of
quinine (abst.), 4, 236: Upon oenocyanine (abst.), 5, 119: On the
existence of manganese in wines (abst.), 6, 200: Alkaline hydrox-
ides (abst.), 7, 283: Combinations of water with salts (abst.), 8,
179: Water of combination of alums (abst.), 8, 272: Alcoholate
of potassium hydroxide (abst.), 8, 273: On Fahlberg's "saccharin" (abst.), 9, 34: On inactose or neutral sugar (abst.), - 10, 16
MAURO, F. Complex organic acids containing boric acid (abst.), - 2, 434 MAURY, G. P. See Murray, C. B.
MAXWELL, W. Relative sensibility of plants to acidity in soils, 20,
103: Methods and solvents for estimating the elements of plant
food probably available in soils, 20, 107: Evaporation and plant
transpiration, 20, 469
MAXWELL-LYTE, F. Estimation of chlorine, bromine, and iodine in
the presence of one another (abst.), 6, 49: Copper oxychloride as
a paint (abst.), 6, 291: Curious association of hydrocarbons with
rock salt in nature (abst.), 10, 75
MAYER, A. Specific gravity of oil from artificial butter (abst.), 4,
188: Method for detecting adulterated butter (abst.), 8, 87: Con-

cerning the method of determining the melting-point of butter, 15, 661
MAYER, F. New preparation of ethylsulphonic acid (abst.), - 12, 158
MAYER, H. On the toxic effects of the lower fatty acids (abst.), - 8, 229
MEADE, R. K. Determination of lead in lead ores, 19, 374: New ap-
paratus for sulphur determinations in iron and steel, and a useful
form of wash-bottle, 19, 581: Volumetric method for the determi-
nation of copper, 20, 610
MEDICUS, L., and E. Schwab. Determination of starch in sausages
(abst.), 1,571
MEEKER, G. H. Determination of silica in blast-furnace slag, - 19, 370
Мє́ни, С. Determination of urea by sodium hypobromite (abst.), 2,
430: Solubility of mercuric iodide in fatty compounds and other
solvents (abst.), 8, 40: Destruction of foam in urea determinations
(abst.), 9, 123
MEINECKE, C. Volumetric estimation of manganese by permanga-
nate (abst.), 7, 91: Analysis of clay (abst.), 9, 35
MEISSL, E. Analysis of butter fat (abst.), 1, 569
MEISSLER, A. See Goldschmidt, H.
MELCKEBEKE, E. VAN. Oxalic acid from oxidation of animal sub-
stances (abst.), 1, 106
MELDOLA, R. Contributions to chemical history of aromatic deriva-
tives of methane (abst.), 4, 202: Constitution of some bromine
derivatives of naphthalene (abst.), 5, 91: Researches on secon-
dary and tertiary azo-compounds (abst.), 6, 94: Test for nitrous
acid (abst.), 6, 288 MELDOLA, *R., and E. R. Moritz. Kjeldahl method for nitrogen
()
MELIKOFF, P. Oxacrylic acid (abst.), 2, 226: See also Werigo, B.
MELLON, W. W. Free acid in superphosphates (abst.), - 9, 224
MENKE, A. E., and W. B. Bentley. New derivatives of vanillin, - 20, 316
MENKE, A. E. See also Wright, C. R. A.
MENSCHUTKIN, N. Influence of isomerism of alcohols and acids in
formation of compound ethers (abst.), 1, 256, 2, 182: Etherifica-
tion of unsaturated monobasic acids (abst.), 2, 172: Structural
formulae of sorbic and hydrosorbic acids (abst.), 2, 173: Etheri-
fication of hydroxy acids (abst.), 4, 205
MERCKLING, [M]. Value of Baudouin's reagent to detect sesame oil
(abst.), 9, 177
MERGET, A. Reagent for mercury vapor (abst.), 1, 336
MERING, J. von. See Musculus, F.
MERLING, G. Tropine (abst.), 4, 226
MERMET, A. See Delachanal, B.
MERRILL, R. S. Explosions and method of testing petroleum oil, P. 1, 115
MERTINS, P. S. See Howe, J. L.
MERZ, V., and J. Tibiriçá. Synthetic preparation of formic acid
(abst.), 2, 94
MERZ, V., and W. Weith. Synthesis of oxalic acid (abst.), - 5, 50

MERZ, V. See Gasiorowski, K., and Gousiorowski, K.
MESSINGER, J. Acetone in methyl alcohol (abst.), 10, 195: Determi-
nation of carbon in organic compounds (abst.), 12, 477
MESSINGER, J., and G. Vortmann. Volumetric determination of
phenols (abst.), 12, 477
METZGER, S. p-Dibromquinoline (abst.), 6, 236
MEULEN, H. G. L. VAN DER. See Mulder, E.
MEUNIER, S. Artificial production of spinel (abst.), 9, 168
MEYER, E. von. Note on cyanethine (abst.), 1, 497: Isatoic acid
(abst.), 7, 174
MEYER, F. Acids produced from xylenes and phthalic anhydride
(abst.), 5, 17: See also Gresly, J.
MEYER, F. L. See Smith, E. F.
MEYER, G. See Ladenburg, A.
MEYER, H. Lactates (abst.), 8, 275
MEVER, L. Improved method of purifying mercury (abst.), 1, 378:
History of the periodic law (abst.), 2, 225 MEYER, P. J. Mustard oil glycolide (abst.), 4, 267
Mayor D. Totachambarana (abat ) 4 257 Microscopia evaning
MEYER, R. Tetrabrombenzene (abst.), 4, 175: Microscopic examina-
tion of printed cotton goods (abst.), 5, 125
MEYER, R., and E. Müller. Constitution of cumic acid (abst.), 4,
266: Synthesis of p-propylbenzoic acid (abst.), 5, 20: Synthesis
of cuminic acid (abst.), 5, 51
MEYER, V. Note on the density of chlorine, 1, 381: Answer to Seel-
heim's remarks on my experiments on chlorine, 1, 481: Observa-
tions on vapor densities (abst.), 2, 371: Calorimetric determination
of temperature (abst.), 2, 371: Lecture experiments (abst.), 4,
227: On hydroxylamine chloride (abst.), 5, 62: On isonitroso
compounds (abst.), 5, 65: Synthesis of thiophen (abst.), 7, 206:
o-Cyanophenol (abst.), 10, 38: The chemical problems of to-day, 11, 101
MEYER, V., and K. Auwers. Formation of anhydrides in the succinic
acid series (abst.), 12, 157
MEYER, V., and A. Müller. Constitution of nitrosomalonic acid
(abst.), 5, 131 MEYER, V., and H. Züblin. Contributions to knowledge of chlorine
(abst.), 2, 371: Platinum bromide (abst.), 2, 371: Density of bro-
mine vapor at a yellow heat (abst.), 2, 371: Experiments on va-
por densities of alkali metals (abst.), 2, 371: Behavior of iodine
at high temperatures (abst.), 2, 371: See also Auwers, K., De-
muth, R., Goldschmidt, H., and Wittenberg, M.
MEYERINGH, W. Volumetric estimation of hydroxylamine (abst.), 1, 346
MICHAEL, A. Synthesis of phenol glucoside and orthoformyl gluco-
side or helicin (abst.), 1, 403: Synthesis of helicin and phenylglu-
coside (abst.), 2, 42: New formation of stilbene, and some of its
derivatives (abst.), 2, 42: Monoethylphthalate, etc. (abst.), 2,
220: Preparation of formaldehyde (abst.), 2, 221: New formation
of ethyl mustard oil (abst.).

MICHAEL, A., and L. M. Norton. Action of iodine monochloride on
aromatic amines (abst.), 1, 484
MICHAELIS, A., and P. Becker. Monophenylboron chloride, and the
pentavalence of boron (abst.), 2, 96: Tolylmethylketone (abst.), 4, 206
MICHAELIS, A., and I. Gleichmann. Di- and triphenylphosphine
(abst.), 5, 22
MICHAELIS, A., and A. Reese. On aromatic antimony compounds
and a method of forming aromatic arsenic compounds (abst.), 5, 63
MICHEL, I. A few crystallized selenates (abst.), 10, 76
MIERS, H. A. Crystallography of bromostrychnine (abst.), - 7, 117
MILLER, A. K. Dilydroxybenzoic acids and iodosalicylic acids
(abst.), 5, 29, 59  MILLER, E. H. Succinimide, 16, 433: Ferrocyanides of zinc and
manganese, 18, 1100
MILLER, E. H., and J. A. Mathews. Table of factors, 18, 903: Fer-
rocyanides of zinc and manganese, 19, 547
MILLER, F. W. See Baskerville, C., and Venable, F. P.
MILLER, H. K. Electrical disturbance in weighing, 20, 428
MILLER, H. von. Note on malonic acid (abst.), 1, 494
MILLER, J. A. The analysis of malt, 16, 353
MILLER, J. A. The analysis of malt, 16, 353  MILLER, W. von. Rouge français (abst.), 2, 226
MILLER, W. VON, and G. Ronde. Addenydes of the hydrochmanne
series (abst.), 12, 231: Contributions to knowledge of Étard's re-
action (abst.), 12, 231
MILLIAU, E. Methods of testing fats and oils, 15, 153
MILLOT, A. Reversion of phosphates in superphosphates used as fer-
tilizers (abst.), 2, 131: Properties of bicalcic phosphate (abst.), 2,
133: Synthesis of ulmic bodies (abst.), 2, 365: Determination of
zinc in zinc ores (abst.), 4, 166: Electrolysis of carbon in ammo-
nia (abst.), 8, 178
MILLOT, A., and L. Maquenne. Volumetric determination of arsenic
(abst.), 1, 333: Fermentations of beet-root juice during diffusion
(abst.), 2, 91
MILLS, E. J. Action of potash on resin (abst.), - 8, 206
MILLS, E. J., and T. Akitt. Estimation of oils and fats (abst.), - 6, 245
MILLS, E. J., and J. Buchanan. Photochemical estimation of graded
tint (abst.), 10, 86
MILLS, E. J., and G. Donald. Action of oxides on salts : potassium
chlorate and ferric oxide (abst.), 4, 142
MILLS, E. J., and J. Pettigrew. The steeping of barley (abst.), 4, 143
MILLS, E. J., and A. G. Rennie. Effect of temperature in dyeing (abst.), 6, 199
MILLS, E. J., and J. Takamine. Absorption of weak reagents by cot-
ton, silk, and wool (abst.), 5, 98
MIQUEL, P. Succinic fermentation (abst.), 1, 273: A new ferment of
urea (abst.), 1, 387: Bacillus ferment of urea (abst.), 1, 488:
Sulphydric fermentation (abst.), 1, 489: Antiseptics and bacteria
(abst.), 6, 79

MITCHELL, C. A. See Helmer, O.
MITCHELL, H. W. Note on litmus, P. I, 79
MITCHELL, W. I. See Wells, H. L.
MIXER, C. T., and H. W. DuBois. The Zimmermann-Reinhardt
method for the determination of iron in iron ores, 17, 405: Särn-
strom's method of determining manganese in iron ores, 18, 385:
Notes on determination of insoluble phosphorus in iron ores, - 19, 614
MIXTER, W. G. Compounds of aromatic amines with silver salts
(abst.), 1,483.
Möhlau, R. Orthodiamidodiphenetol (abst.), 1, 495: On methy-
lene blue (abst.), 6, 86
Mohr, C. Volumetric determination of phosphoric acid (abst.), 4,
164: Remarks on azotometry (abst.), 6, 96
Mohr, F. Nature of cohesion and its chemical signification (abst.), 2, 57
Moissan, H. Amalgams of chromium, etc. (abst.), 1, 276: Iron re-
duced by hydrogen (abst.), 1, 401
Moitessier, A. See Engel, R.
Monnet, P. Reduction of cupric salts by sugars (abst.), - 10, 189
MONNET, P., F. Reverdin, and E. Nölting. Methylaniline, methyl-
toluidine, and derived coloring-matters (abst.), 1, 273: Presence
of metanitrotoluene in commercial nitrotoluene (abst.), 1, 486:
Dimethylnaphthylamine and naphthoquinone (abst.), - 2, 91
MONNETY Cos, P. Production of a gray color on fiber by simultane-
ous oxidation of aromatic mon- and diamines (abst.), - 8, 231
Monnier, D. On Skrivanoff's battery (abst.), 6, 126
Monor. Manufacture of crystal glass (abst.), 1, 172
Moore, C. C. Determination of potash without the previous removal
of iron, calcium, etc., 20, 340 MOORE, G. E. Progress of analytical chemistry, - 1, 83, 320, 527
Moore, G. E. Progress of analytical chemistry, - 1, 83, 320, 527
Moore, R. W. On Koettstorfer's method of butter analysis (abst.),
6, 311: Relation of cocoanut oil to methods of butter analysis, 7,
188: Comparative results in the analysis of fats, 11, 144: Analysis
of marine oils, 11, 155
MOORE, T. Separation of zinc and nickel (abst.), 6, 288
Moraht, H. See Krüss, G.
MORAWSKI, T. Delicate reaction for fir resin (abst.), - 10, 195
MORAWSKI, T., and H. Demski. Examination of oils containing un-
saponifiable fats (abst.), 8, 39
Morawski, T. See also Stingl, J.
MOREHEAD, J. T., and G. de Chalmot. Manufacture of calcium car-
bide, 18, 311
Morel, J. See Hugounenq, L.
MORGAN, T. M. On a new process for the extraction of indigotine
from commercial indigo, 12, 302
from commercial indigo, 12, 302  MORIN, H. Essential oil of <i>Licari kanali</i> (abst.), 4, 233
MORITZ, E. R. See Meldola, R.
MORIEV E. W. Moisture retained by gaces dried by means of cul-

phuric acid (abst.), 7, 295: Moisture remaining in gases dried by means of phosphorus pentoxide (abst.), 10, 67: Volumetric composition of water, 12, 275: Carbon, an impurity in hydrogen affecting determination of atomic weights, 12, 276: Jean Servais Stas, 14, 173
Morley, H. F. Methylated diethyleneamines (abst.), 2, 223: Oxypropyltoluidine (abst.), 4, 206; 5, 29, 58: Ethyl thioxalate (abst.), 5, 236
MORLEY, H. F., and A. G. Green. On propylenechlorhydrin (abst.), 7, 118
MORRELL, T. T. Estimation of small quantities of potash with platinic chloride, 2, 145: Estimation of copper as oxide, 2, 146: Composition of gases in cavities of a Bessemer ingot, 2, 146: Determi-
nation of alcohol with cobalt sulphocyanide, 2, 340 MORRIS, G. H. $\alpha$ -Methylhydroxysuccinic acid, etc. (abst.), 2, 342;
Constituents of resin spirit (abst.), 4, 200 MORSE, F. W. Oven for drying in hydrogen, 15, 709
Morse, F. W. Oven for drying in hydrogen, 15, 709
Morse, H. N., and W. S. Bayley. On haydenite (abst.), - 6, 158
MORSE, H. N. See also Remsen, I. MORTON, H. Elimination of antimony from the human system, P. 2,
142: Chronology of isomeric purpurines, 1, 184: Effect of change
of density in alum purpurine solutions on the absorption bands, 2, 362
MORTON, H., and W. E. Geyer. New sulpho acid of phenanthrene, 2, 203
Mory, A. V. H. See Noyes, W. A.
Mott, H. A. Manufacture of artificial butter, P. 1, 154: Applica-
tion of polarized light to the examination of the alkaloids of the
quinine group, P. 2, 57: Absorption of sugar by bone black, 1,
509: Valuation of the sugars of commerce, 1, 514: Effects of alu-
mina salts on gastric juice in digestion, 2, 13: An examination of
the meat of poultry fattened by the French process, 12, 44
MOYER, J. B. Metal separations by means of hydrochloric acid gas,
18, 1029: See also Smith, E. F.
Muck, F. Apparatus for evaporating ammoniacal solutions at a low
temperature (abst.), 9, 220 MÜHLHÄUSER, O. On carborundum, 15, 411
MULLER, A. Heat of combustion of certain amines (abst.), 7, 289:
Preparation of a lubricant (abst.), 8, 109: See also Meyer, V., and
Zimmermann, Y.
MULLER, C. L., and G. Kircher. Action of lead and manganese di-
oxides on haloid salts of metals in presence of acetic acid (abst.), 5, 23
MULLER, C. L. See also Erlenmeyer, E.
MULLER, E. See Meyer, R.
MULLER, F. C. G. Gases enclosed in iron and steel (abst.), 1, 165: Re-
searches on the Bessemer process (abst.), 1, 165
MULLER, M. On the purple colors derived from gold (abst.), - 7, 76
MULLNER, F. See Donath, E.
MUNTZ, A. Galactin (abst.), 4, 231: Oxidation of iodine in the pro-
cess of nitrification (abst.), 7, 287: Existence of the constituents
of milk-sugar in plants (abst.), 8, 62: On the formation of deposits of sodium nitrate (abst.), 8, 70
its of sodium nitrate (abst.), 8, 70

Muir, M. M. P. Influence of temperature upon the decomposition of
barium chloride by potassium oxalate in aqueous solution (abst.),
2, 346: Action of water on bismuth iodide; a lecture experiment
(abst.), 4, 142: Volumetric determination of bismuth (abst.), 4,
167: Detection of tin in presence of antimony (abst.), 4, 168
Muir, M. M. P., and C. E. Robbs. Volumetric estimation of bismuth
as oxalate (abst.), 4, 141
MUIR, M. M. P., and C. Slater. Influence of dilution on chemical
changes (abst.), 2, 345 MULDER, E. Normal cyanic acid and its derivatives (abst.), - 4, 176
MULDER, E., and H. G. L. van der Meulen. Thermochemistry of
ozone (abst.), 4, 266
MULLER, A. See Ortlieb, J.
MULLER, J. A. Influence of pressure and temperature in the action
of potassium chloride on crude methylamine carbonate (abst.), 9, 103
MUNROE, C. E. Apparatus for obtaining distilled water from the ser-
vice steam, P. 1, 211: Estimation of manganese as pyrophosphate,
P. 1, 215: Flashing test for gunpowder, 6, 7: Spontaneous de-
composition of explosive gelatine, 6, 13: Determinations of the
firing points of various explosives, 12, 57: Peculiar perforation of
zinc rods, 13, 286: Composition of certain modern powders, 15, 1:
Determination of relative sensitiveness of explosive substances,
15, 10: Preliminary report of the committee on the tariff, 16, 102:
Inspection of cotton for use in manufacture of guncotton, 17, 783:
Development of smokeless powder (review), 18, 819, (66): Early
specimen of guncotton, 19, (12)
MUNSCHEID. Blowing machine (abst.), 1, 91
MUNSELL, C. E. An analysis of slag from ignited garbage, 6, 188:
Analysis of sam-shu, a Chinese liquor, 7, 243: The lactometer, its
utility and reliability, 10, 122: Some analyses of carbon minerals, 13, 143
MURRAY, C. B., and G. P. Maury. Rapid method for determination
of silicon in silico-spiegel and ferro-silicon, 19, 138
MURRILL, P. An efficient gas-pressure regulator, 20, 501
Musculus, F., and C. Amthor. Composition of wines of bad years
(abst.), 4, 192
Musculus, F., and D. Gruber. Action of diastase or dilute sulphuric
Musculus, F., and J. von Mering. Action of diastase, etc., on starch
and glycogen (abst.), 1, 173, 273
MUTER, J., and L. De Koningh. Method for analysis of fats and oils
(abst.), 10, 194
Mylius, E. Volumetric determination of zinc in potable water (abst.), 1, 564
NÄGELI, E. On hydroxylamine reactions (abst.), - 5, 126
NAKAMURA, T. Cause of diminishing flame in lamps fed with in-
ferior kerosene (abst.), 6, 29
NATANSON, S. Fittica's fourth nitrophenol (abst.), 2, 371 NAUDIN, L. On anthemene. Researches on Roman camonile (abst.), 6, 191

NAUMANN, A. Stereochemical considerations (abst.), - 12, 155
NEMIROWSKY, J. Action of phosgene upon glycolchlorhydrin
(abst.), 7, 144
NENCKI, M. Fungoid growth in absence of oxygen (abst.), 1, 494:
Empirical formula of skatole (abst.), 2, 137
NENCKI, M., and P. Giacosa. Presence of bacteria in organs of
healthy animals (abst.), 2, 289
NENCKI, M., and F. Schaffer. Chemical composition of bacteria
(abst.), 2, 136
NESSLER, J. Detection of free tartaric acid, and on sulphuric acid,
in wine [(abst.), 1, 364: Reply to Lunge, on sulphuric acid in
wine (abst.), 1, 365: Valuation of wines (abst.), - 6, 138
NESSLER, J., and M. Barth. Method for analysis of wine (abst.), 4, 189
NEUBAUER, H. Determination of phosphoric acid as magnesium
pyrophosphate, 16, 289
NEUMANN, S. Estimation of quinine in quinine tannate (abst.), 12, 120
NEUMEISTER, R. Bromdichloracetic acid and chlordibromacetic
acid (abst.), 4, 269: See also Jacobsen, O.
NEVILLE, R. H. C., and A. Winther. Orcinol and some other
dihydroxytoluenes (abst.), 5, 61
NEWMAN, H. E. See Norton, T. H.
NIBELIUS, A. W. Design for water-bath, 15, 374
NICHOLSON, H. H., and S. Avery. Electrolytic determination of
iron, nickel, and zinc, 18, 654
NICOL, W. W. J. Action of heat on thioformanilide (abst.), 4, 206:
Volume alteration attending the mixture of salt solutions
(abst.), 5, 97: Molecular volume of salt solutions (abst.), 6, 48:
The connection between pseudo solution and true solution
(abst.), 6, 286
NIEDERIST, G. Action of water on haloid compounds of alcohol
radicals (abst.), 2, 65
NIEHLS, W. Improved mercury thermometer for high tempera-
tures, 16, 396: Scale of hardness for glass, 16, 406
NIEMÖLLER, F. Physical properties of chemical compounds (abst.), 6, 43
NIETZKI, R. Some derivatives of quinol (abst.), I, 161: Naphthyl-
sulphuric acid (abst.), 4, 227: Dye-stuffs, resulting from the
simultaneous oxidation of p-diamines with monamines (abst.),
6, 289: p-Amidoacetanilide and a few new azo-compounds
(abst.), 7, 55
NIETZKI, R., and T. Benckiser. o-Nitranilinesulphonic acid and a
new method of preparing o-nitraniline (abst.), - 7, 227
NIETZKI, R., and O. Goll. On azonaphthalene (abst.), - 7, 228
NILSON, L. F. Bunsen's older method of separating antimony from
arsenic (abst.), 1, 332: Atomic weight of thorium (abst.), - 5, 118
NITSCHE, F. Detection of hydrocarbons in fat and oil (abst.), 8, 86
NOACK, E. Preparation of carbon monoxide (abst.), 5, 64: Fluidity of anlydrous and diluted acetic acid (abst.).
of anniverous and entitled acetic acid (abst.), 0, 229

NOBLE, SIR A., and Sir F. A. Abel. Combustion of gunpowder
(abst.), 1, 399
NÖLTING, E. An isocyanide in the lighter portions of commercial
benzene (abst.), 7, 29: Notes on o-nitrobenzyl chloride, on the
high boiling phenols of coal tar, on the constitution of phthalyl
chloride (abst.), 7, 56
NÖLTING, E., and A. Collin. Formation of a blue from rosaniline
(abst.), 6, 287: Pyridine carboxylic acids (abst.), 6, 287: On the
constitution of styphnic acid (abst.), 6, 287: Nitrating under
various conditions (abst.), 6, 309: Nitro-o-toluidine and a few
of its derivatives (abst.), 6, 310
NÖLTING, E., and O. Kohn. Azo- and disazo-compounds of the
cresols (abst.), 7, 54: Nitroso-o-cresol (abst.), - 7, 55
NÖLTING, E., and O. N. Witt. On o-amidoazo-compounds (abst.), 6, 82
NÖLTING, E. See also Monnet, P., and Reverdin, F.
NÖRDLINGER, H. Bicuhyba fat (abst.), 8, 42: Oxidation of pure
myristic acid with nitric acid (abst.), 8, 205: Free fatty acids in
oils (abst.), 11, 55
NORRIS, R. S. See Benedict, F. G.
NORTON, C. H. See Tscherniac, J.
NORTON, L. M. See Michael, A.
NORTON, T. H. The contributions of chemistry to the methods of
preventing and extinguishing conflagration, 17, 137, 251, 361:
New forms of gas generators, 18, 1057: Some peculiar forms of
iron, 19, 108: Tungsten-iron alloy, 19, 110: Use of aluminum
for condensers, 19, 153: Derivatives of benzenesulphonic acid, 19, 835
NORTON, T. H., and H. Loewenstein. Salts of dinitro-α-naphthol
with various metallic bases, 19, 923
NORTON, T. H., and H. E. Newman. Soluble compound of hydras-
tine with monocalcium phosphate, 19, 838
NORTON, T. H., and D. M. Roth. Volatility of certain inorganic
salts, 19, 155: On the existence of orthosilicic acid, - 19, 832
NORTON, T. H., and I. J. Smith. On certain amine derivatives of
dinitro-α-naphthol and its chlorination, 19, 927
NORTON, T. H., and J. Tscherniac. Halogen derivatives of ethyl acet-
amide, P. 2, 115: Glycollide, P. 2, 118: Ethoxy-acetonitrile, P. 2, 124
Nourrisson, C. Anisoilphthaloylic acid (abst.), 8, 182
NOYES, A. A. The reliability of dissociation-values determined by
electrical conductivity measurements, 20, 517
Noyes, A. A., and E. S. Chapin. Solubility of acids in solution of
the salts of other acids, 20, 751
Noves, A. A., and J. T. Dorrance. Electrolytic reduction of para-
nitro compounds in sulphuric acid solution, 17, 855
Noves, A. A., and D. Schwartz. Solubility of salts of weak acids
in stronger acids, 20, 742
Noyes, A. A., and R. S. Wason. Velocity of reaction between ferrous chloride, potassium chlorate, and hydrochloric acid 19, 190

NOYES, A. A., and W. H. Watkins. Occurrence of trimethylene
glycol as a by-product in glycerol manufacture, 17, 890
NOYES, A. A., and W. R. Whitney. Rate of solution of solid sub-
stances in their own solutions, 19, 930
NOYES, A. A., and E. H. Woodworth. The theory of solubility
effect in the case of tri-ionic salts, 20, 194
Noves, W. A. Quantitative work for beginners in chemistry, 16, 59:
Detection of strychnine in an exhumed human body, 16, 108:
Post-mortem detection and estimation of strychnine, 16, 720:
Preparation of diethyl malonic ester, 18, 1105: Toronto meet-
ing of the British Association for the Advancement of Science, 19, 840
NOVES, W. A., and W. M. Blinks. The determination of benzene
in illuminating gas, 16, 697
Noves, W. A., W. M. Blinks and A. V. H. Morey. Oil gas, - 16, 688
Noves, W. A., C. B. Dudley, and W. F. Hillebrand. Preliminary
report of the Committee on Coal Analysis, 20, 281
NOVES, W. A., and E. D. Frohman. The volumetric determination
of phosphorus in steel, 16, 553
Noves, W. A., J. R. McTaggart, and H. W. Craver. Determination
of heating effects of coals, 17, 843
Noves, W. A., and J. S. Royse. Volumetric determination of phos-
phorus in steel and cast iron 17, 129
Noves, W. A., and J. W. Shepherd. Determination of methane,
carbon monoxide, and hydrogen, etc., 20, 343
NUTH, G. Action of p-amidodimethylaniline on aldehyde (abst.), 7, 230
OBERHOLTZER, V. See Smith, E. F.
ODLING, W. See Crookes, W.
OECHSNER DE CONINCK, W. β-Lutidine derivatives of brucine
(abst.), 6, 36: Lutidine of coal tar (abst.), 6, 82: Detection and
determination of bases of the pyridine and quinoline series
(abst.), 7, 292: Nature and properties of alkaloids (abst.), 8, 23
OECHSNER DE CONINCK, W., and J. C. Essner. β-Lutidine deriva-
tive of brucine (abst.), 6, 36: On isomerism in the pyridine
series (abst.), 6, 83
OEHLER, H. See Claus, A.
OETTEL, F. Volumetric determination of fluorine (abst.), 9, 10:
Analysis of German silver (abst.), 10, 64
OGIER, J. Heat of formation of hydrogen silicide (abst.), 1, 487:
Heat of formation of ethyl silicate (abst.), 1, 487: Hydrochloride
of phosphine (abst.), 2, 88: Heat of formation of phosphine hy-
drobromide and hydriodide (abst.), 2, 89: Vapor-density of
pyrosulphuryl chloride (abst.), 4, 78: New oxychloride of sul-
phur (abst.), 4, 23I
OGLIALORO, A. Characteristic reactions of picrotoxin (abst.), - 1, 339
OHNMAIS, K. See Krüss, G.
O'NEAL, E. A. See Howe, J. L.
U NEAL, E. A. See Howe, J. L.

OPPENHEIM, F. See Pflüger, E.
Ordonneau, C. Composition of spirits of wine (abst.), 8, 58
Orlowski, A. Determination of cadmium in presence of copper
(abst.), 4, 167: Determination of cuprous compounds in presence
of cupric (abst.), 4, 167
ORTLIEB, J., and A. Muller. Solvay process for production of
potassium carbonate (abst.), 4, 74
OSBORNE, T. B. The proteids of the kidney bean (Phaseolus vul-
garis), 16, 633, 703, 757: Proteids of the rye kernel, 17, 429: The
proteids of barley, 17, 539: Chemical nature of diastase, 17, 587:
Amount and properties of the proteids of the maize kernel, 19, 525
OSBORNE, T. B., and G. F. Campbell. Chemical nature of diastase,
18, 536: Proteids of malt, 18, 542: Proteids of the potato, 18, 575:
Legumin and other proteids of the pea and the vetch, 18, 583:
Conglutin and vitellin, 18, 609: Proteids of lupin seeds, 19, 454:
Effect of minute quantities of acid on the solubility of globulin
in salt solutions, 19, 482: Proteids of the sunflower seed, 19, 487:
Proteids of the cow pea, 19, 494: Proteid of the white podded
adzuki bean, 19, 509: Proteids of the pea, 20, 348: Proteids of
the lentil, 20, 362; Proteids of the horse bean, 20, 393: Proteids
of the vetch, 20, 406; The proteids of the pea, lentil, horse
bean, and vetch, 20, 410: Proteids of the soy bean, 20, 419
OSBORNE, T. B., and C. L. Voorhees. The proteids of the wheat
kernel, 16, 524: The proteids of cottonseed, 16, 778
OSER, J., and W. Kalmann. New indicator for acidimetry (abst.), 4, 166
O'SHEA, L. T. History of the constitution of bleaching powder
(abst.), 5, 237
OSMOND, F. See Witz, G.
OSSIKOVSKY, J. Cinnamic aldehyde obtained by pancreatic diges-
tion of fibrine (abst.), 2, 368: Constitution of tyrosine and ska-
tole (abst.), 2, 368
Ost, H. Pyromeconic acid (abst.), 1, 294, 490: Determination of
sugars by copper potassium carbonate solution (abst.), - 12, 226
OSTERMAIER, H. See Friedländer, P.
OSTERSETZER, O. Apparatus for direct determination of carbon
dioxide (abst.), 10, 67
OSTWALD, W. Methods of estimating chemical affinity (abst.),
1, 497: On chemical energy, 15, 421
O'SULLIVAN, C. γ- and β-Amylan (abst.), 4, 143: Estimation of
starch (abst.), 6, 44: Arabic acid, composition, etc. (abst.), 6, 87
OTTO, R. Formation of sulphonic acids from sulphones (abst.),
1, 293: Preparation of hydrogen sulphide in toxicological in-
vestigations (abst.), 1, 293, 378, 393: Synthesis of the so-called
alkyldisulphoxides (abst.), 4, 176: Formation of sulphones
from alkyl-sulphonated acids (abst.), 7, 203: Eukairite from
Rioja, Argentine Republic (abst.), 12, 224: Ethoxyacrylic acid
from α-dichlorpropionic acid (abst.), 12, 227: Behavior of

sodium phenyl mercaptide with isobutylene bromide (abst.), 12, 229
OTTO, R., and H. Beckurts. Pyrocinchonic acid and dichloradipic
acid from $\alpha$ -dichlorpropionic acid (abst.), - 8, 35, 36
OUDEMANS, A. C., Jr. Contributions to knowledge of quinamine
(abst), 2, 176
OWEN, F. A. Method of determining indigotin for commercial pur-
poses, 10, 178; 13, 32
PAAL, C. Action of acetyl chloride on benzaldehyde in presence
of zinc dust (abst.), 5, 133: Acetonylacetone (abst.), - 7, 147
PABST, J. A. Continuous process for preparation of ethyl acetate
(abst.), 2, 366
PACKARD, R. L. Aluminum, 15, 221, 276
PADÉ, L. See Dubois, C.
PAGENSTECHER, A. Contributions to knowledge of angelic and
tiglic acids, 1, 240
PALM, R. Precipitation and estimation of digitaline, etc. (abst.),
6, 42: Detection and determination of lactic acid (abst.), 9, 16:
Detection of small quantities of albumin (abst.), 9, 37: Deter-
mination of albumin according to Milton and Commaille (abst.),
9, 47: Determination of protein compounds in milk (abst.),
9, 48: Character of peptones and the separation of albumin
from the same (abst.), 10, 157
PAMMEL, E. E. See Bennet, A. A.
PANAOTOVITS, W. Synthesis of anthraquinone (abst.), 7, 32:
p-Methylisatoic acid and its derivatives (abst.), - 7, 144
PAPASOGLI, G. See Bartoli, A.
PAPE, C. See Baeyer, A.
PARKER, C. E. Safety attachment for riders, 16, 764
PARKER, C. L. Our present knowledge of argon, with a partial
PARKS, N. See Smith, A. W.
PARMENTIER, F. Silico-molybdic acid (abst.), 4, 77: On a hydrate
of molybdic oxide (abst.), 5, 118
PARNELL, E. W. Action of nitrates on alkaline sulphides (abst.), 6, 142
PARR, S. W. Sodium peroxide as a third group reagent, 19, 341:
See also Caldwell, G. C.
Parry, J. Spectroscopic examination of iron etc. (abst.), - 6, 232
Parsons, C. C. Method of drying sensitive organic substances, 19, 388
Parsons, C. L. The Le Sueur process for the electrolytic produc-
tion of sodium hydroxide and chlorine, 20, 868
PARSONS, H. B. Method for proximate analysis of plants (abst.), 2, 220
PASTEUR, L. Virulent diseases; and especially the disease called
chicken cholera, 2, 79: Chicken cholera: study of the condi-
tions of non-recidivation and other characteristics, etc., - 2, 214
PASTROVICH, P. On artificially colored claret wines (abst.), 5, 23
PATEIN, G. Researches on sulphines (abst.), 10, 82

PATTINSON, J. Volumetric determination of manganese (abst.),
1, 327: Determination of arsenic in copper (abst.), 4, 167: In-
ternational methods of sampling and testing (abst.), 6, 32:
Rate at which bleaching-powder loses its available chlorine
(abst.), 10, 90: Testing of lard for cotton-seed oil and beef
stearin (abst.), 10, 182
PAVEC, A. Volumetric determination of phosphoric acid (abst.), 1, 356
PAVY, F. W. Volumetric estimation of sugar (abst.), I, 109: Volu-
metric estimation of glucose (abst.), 1, 341: The physiology of
the carbohydrates in the animal system (abst.), - 6, 159, 233
PAWLEWSKI, B. Velocity of reactions (abst.), 2, 368: Critical tem-
peratures of liquids (abst.), 4, 264: Facts about paraffin (abst.), 12, 157
PAWLOW, D. Tetramethylethylene and its derivatives, and the
chemical structure of pinacone (abst.), 2, 54
PAYKULL, G. See Bäckström, H.
PAYNE, G. F. Mineral constituents of the watermelon, - 18, 1061
PAYNE, H. L. Correction, 16, 112
Peacock, J. C. See Trimble, H.
Pease, F. N. See Dudley, C. B.
PECHMANN, H. von, and W. Welsh. Formation of pyridine deriv-
atives from malic acid (abst.), 7, 117
atives from malic acid (abst.), 7, 117 PECKHAM, S. F. The asphalt question, 17, 55
PEIRCE, B. O. Emission spectrum of halogen compounds of mer-
cury (abst.), 1, 374
Peirce, Gertrude K. See Smith, E. F.
Pellet, H. Carbonated cupric solution for estimation of glucose
(abst.), 1, 344: Determination of the crystallizable sugar in the
beet, 16, 266
PELLET, H., and J. de Grobert. Colorimetric estimation of sali-
cylic acid (abst.), 4, 189
Pellet, H. See also Robinet, E.
Pellizari, G. Amidobenzoic acid derivatives of succinic, sebacic,
and phthalic acids (abst.), 7, 202
PEMBERTON, H., JR. Volumetric determination of phosphoric acid,
(abst.), 4, 164: Determination of phosphoric acid by titration
of the yellow precipitate with alkali, 15, 382: Education of in-
of the jellow precipitate with alkali, 13, 302. Education of the
dustrial chemists 15, 627. Determination of phosphoric acid
dustrial chemists, 15, 627: Determination of phosphoric acid,
dustrial chemists, 15, 627: Determination of phosphoric acid, 16, 278: Determination of phosphoric acid, 17, 178
dustrial chemists, 15, 627: Determination of phosphoric acid, 16, 278: Determination of phosphoric acid, 17, 178 Penfield, S. L. Volumetric determination of fluorine (abst.),
dustrial chemists, 15, 627: Determination of phosphoric acid, 16, 278: Determination of phosphoric acid, 17, 178 PENFIELD, S. L. Volumetric determination of fluorine (abst.), 1, 113, 539: Chemical composition of triphylite (abst.), - 1, 391
dustrial chemists, 15, 627: Determination of phosphoric acid, 16, 278: Determination of phosphoric acid, 17, 178  Penfield, S. L. Volumetric determination of fluorine (abst.), 1, 113, 539: Chemical composition of triphylite (abst.), - 1, 391  Penney, M. D. Amount of alumina in flour (abst.), - 1, 110
dustrial chemists, 15, 627: Determination of phosphoric acid, 16, 278: Determination of phosphoric acid, 17, 178  PENFIELD, S. L. Volumetric determination of fluorine (abst.), 1, 113, 539: Chemical composition of triphylite (abst.), - 1, 391  PENNEY, M. D. Amount of alumina in flour (abst.), - 1, 110  PENNINGTON, MARY E. Derivatives of columbium and tantalum, 18, 38
dustrial chemists, 15, 627: Determination of phosphoric acid, 16, 278: Determination of phosphoric acid, 17, 178  PENFIELD, S. L. Volumetric determination of fluorine (abst.), 1, 113, 539: Chemical composition of triphylite (abst.), - 1, 391  PENNEY, M. D. Amount of alumina in flour (abst.), 1, 110  PENNINGTON, MARY E. Derivatives of columbium and tantalum, 18, 38  PENZOLDT, F., and E. Fischer. Reaction of aldehydes (abst.), - 5, 239
dustrial chemists, 15, 627: Determination of phosphoric acid, 16, 278: Determination of phosphoric acid, 17, 178  PENFIELD, S. L. Volumetric determination of fluorine (abst.), 1, 113, 539: Chemical composition of triphylite (abst.), - 1, 391  PENNEY, M. D. Amount of alumina in flour (abst.), 1, 110  PENNINGTON, MARY E. Derivatives of columbium and tantalum, 18, 38  PENZOLDT, F., and E. Fischer. Reaction of aldehydes (abst.), - 5, 239  PERGER, H. VON. Constitution of α-diamidoauthraquinone, etc.,
dustrial chemists, 15, 627: Determination of phosphoric acid, 16, 278: Determination of phosphoric acid, 17, 178  PENFIELD, S. L. Volumetric determination of fluorine (abst.), 1, 113, 539: Chemical composition of triphylite (abst.), - 1, 391  PENNEY, M. D. Amount of alumina in flour (abst.), 1, 110  PENNINGTON, MARY E. Derivatives of columbium and tantalum, 18, 38  PENZOLDT, F., and E. Fischer. Reaction of aldehydes (abst.), - 5, 239

PERKIN, W. H. Analysis of organic bodies containing nitrogen
(abst.), 2, 352: Action of acetyl chloride on fumaric acid (abst.),
4, 221: Rotary polarization under magnetic influence (abst.),
4, 257: Luminous incomplete combustion of ether, etc. (abst.),
4, 259: Preparation of diphenyleneketone oxide (abst.), 5, 93, 121:
On some diazo derivatives of nitrobenzyl cyanide (abst.), - 5,96
PERKIN, W. H., Jr. Condensation products of oenanthaldehyde
(abst.), 5, 94: Condensation products of isobutaldehyde (abst.),
5, 94: Action of ethylene bromide on ethyl malonate (abst.), 6, 83:
Some derivatives of hydrindonaphthene (abst.), 6, 160: On the
PERKIN, W. H. Jr., and G. Bellenot. p-Nitrobenzoylacetic acid
· //
PERKIN, W. H., Jr. See also Baeyer, A.
PERKINS, F. P. Conduct of ammonia test in potable waters (abst.),
1, 565: Analysis of butter-fat (abst.), 1, 568: Determination of
nitrates and nitrites in water, as ammonia (abst.), 4, 163
Perret, E. Determination of tannin in vegetable substances (abst.), 6, 35
PERREY, A. See Hautefeuille, P.
PERRY, N. W. Fusion, casting, etc., of iridium (abst.), - 7, 66
Peter, A. M. Changes in official methods of soil and ash analyses, 16, 792
PÉTER, [M.] Action of oils on polarized light (abst.), - 9, 176
Petermann, A. Remarks on Mohr's article on determination of re-
verted phosphoric acid (abst.), 7, 179: Assimilation of atmos-
pheric nitrogen, 12, 145
pheric nitrogen, 12, 145 PETERS, K. Linoleic acid (abst.), 8, 230
Petri, C. Contributions to the knowledge of funiaric and maleic
acids (abst.), 1, 236
Petri, J. Spectroscopic detection of ergot in flour (abst.), - 1, 340
PETRI, R. Chemistry of chondrine (abst.), 1, 397
Petrieff, M. Double decomposition dependent on atomic weight
(abst.), 6, 128: Purification of bone oil (abst.), 6, 136
(abst.), 6, 128: Purification of bone oil (abst.), 6, 136 PETTERSSON, O. Determination of carbon dioxide (abst.), - 12, 354
Pettersson, O., and A. Smitt. Determination of free and combined
carbon in iron or steel (abst.), 12, 352: New method for determina-
tion of carbon in iron and steel, 15, 213
PETTIGREW, J. See Mills, E. J.
PFAUNDLER, L. Determination of vapor-densities (abst.), - 1, 170 377
PFLÜGER, E., D. Finkler, and F. Oppenheim. Method for elementary
analysis of nitrogenous substances (abst.), 1, 336
PFORDTEN, O. VON DER. Reduction of molybdenum compounds
(abst.), 5, 51: Determination of phosphoric acid (abst.), 5, 52:
Absorbent for oxygen (abst.), 7, 177 PHILIPP, J. On tungsten bronnes (abst.), 4, 266
PHILIPP, O. See Fischer, B.
I HILLIFF, O. DEC L'ISCHEI, D.
PHILLIPS, F. C. A form of silver obtained in the reduction of the sulphide by hydrogen, 16, 700: Occurrence of hydrogen and methane

in the atmosphere, 17, 801: Evolution method for determination
of sulphur in white cast iron, 17, 891: Determination of sulphur
in cast iron, 18, 1079: Lubricants for glass stop-cocks, 20, 678:
Occurrence of hydrogen sulphide in the natural gas, etc., - 20, 696
PHILLIPS, W. B. Rate of reversion in superphosphates, 6, 224:
Reversion of phosphoric acid by heat, etc., 6, 229
PHILLIPS, W. B., and D. Hancock. Commercial analysis of bauxite, 20, 209
PHIPSON, T. L. Coloring-matter of Palmella cruenta (abst.), 1, 403:
Chemical phenomena of respiration of plants (abst.), 6, 232: De-
termination of phosphoric acid in contaminated waters (abst.), 9, 174
PICARD, P. Determination of glucose in blood (abst.), I, 35I
PICKERING, S. U. Molecular weight of basic ferric sulphate (abst.),
5, 100: Note on a basic ammonium copper sulphate (abst.), 5, 231:
Heat of hydration of salts (abst.), 6, 189: Modifications of sodium
sulphate (abst.), 7, 28: On the heats of dissolution of the sul-
phates of potassium and lithium (abst.), 7, 52: Calorimetric deter-
minations of magnesium sulphate (abst.), 7, 52
PICTET, A. On quinoline and lutidine (abst.), 4, 272
PIGEON, N. Oil of malt, 7, 22
PILLITZ, W. Analysis of the Zsadányer meteorite (abst.), - 1, 86
PINNER, A. Condensation of acetone (abst.), 4, 268: Behavior of
hydrocyanic acid and of ethylenecyanide to hydrochloric acid and
alcohol (abst.), 5, 123: Action of phenylhydrazine upon the imido-
ethers (abst.), 6, 235: Action of hydroxylamine upon the imido-
ethers and the amidines (abst.), 6, 236
Pinnow, J. See Will, W.
PITKIN, L. Compound platinates and a new platinum potassium
salt, 1, 472: The chlorobromplatinates of potassium, 2, 196: Iso-
morphous salts and fractional crystallization, 2, 408: Action of
cold concentrated sulphuric acid on lead and its alloys, 5, 219:
Action of concentrated sulphuric acid, at 100°, on lead and its
alloys, 5, 224: Efficiency of porous porcelain filters, 9, 22: Solu-
bility of alumina residues from baking powders in gastric juice,
9, 27: Influence of tartrates and lactates on the digestion of
albuminoids, 12, 394: Alum phosphate baking powders, - 12, 452
PITMAN, J. R. Action of sulphuric acid on mercury, 20, 100
PLACEWAY, L. A. See Bennett, A. A.
PLAGEMANN, A. Action of amines on dichlornaphthoquinone (abst.), 4, 265
PLANCHON, V. Determination of glycerol by oxidation (abst.), - 10, 197
PLANTA, A. von, and E. Schulze. A new crystallizable carbohydrate
(abst.), 12, 352
PLATT, C. Qualitative examination of acetanilide, 18, 142: Separation
of alkaloidal extracts, 18, 1104: Normal urine, 19, 382: See also
Griffith, A. B.
PLIMPTON, R. T. Some halogen compounds of acetylene (abst.), 5, 29, 58
PLIMPTON, R. T., and E. E. Graves. Estimation of the halogens in
volatile organic compounds (abst.)

Plugge, P. C. Decomposition of mercuric cyanide by dilute acids
(abst.), 1, 556: Separation of the alkaloids of opium (abst.),
9, 176 : A reaction of narceine (abst.), 9, 177
Polis, A. Cubic alum and the accommodation of chrome alum
(abst.), 2, 370: Aromatic lead compounds (abst.), - 10, 39
POLLARD, W. See Seubert, K.
Polstorff, K. Action of potassium ferricyanide on morphine (abst.),
2, 97: Action of potassium ferricyanide on methylmorphine iodide
(abst.), 2, 98: Action of benzoyl chloride on morphine (abst.),
2, 98 : See also Broockmann, K.
PONCY, C. DE. See Caillol de Poncy, O.
POND, F. J., and F. T. Beers. Derivatives of eugenol, - 19, 825
PONOMAREFF, J. Ethyl cyanate and cyanurate (abst.), 4, 267: Con-
stitution of allantoxanic acid (abst.), 6, 135
Pool, F. V. New form of dropping flask, 7, 20
POOLE, H. Determination of fat and casein in feces, 19, 877: Deter-
mination of undigested fat and case in infant feces, - 20, 765
POPE, F. J. Volumetric estimation of lead, 18, 737: Estimation of sul-
phides in calcium carbide, 18, 740
POPPER, A. Decomposition of solutions of hypochlorous acid and of
chlorine in sunlight (abst.), 7, 120
POPPER, R. Determination of precipitates without filtration, etc.
(abst.), 1, 84
PORTER, J. H. The Porter-Clark process (abst.), 6, 103
Posen, E. Note on amidohydrocinnamic (phenylamidopropionic)
acid (abst.), 1, 243
Post, J. Action of sulphuric acid on phosphates, especially calcium
phosphate, with respect to manufacture of superphosphates (abst.),
2, 96: Composition of manganese peroxide produced by the Weldon
process (abst.), 2, 96: Oxidation of manganous hydroxide with
respect to the regeneration of manganese dioxide (abst.), - 2, 96 Post, J., and E. Hardtung. Action of sulphuric acid on isomeric
** ** ** *** ***
POTILITZINE, A. Relation of speed of reaction and atomic weight (abst.), 6, 128: On the hydrates of cobalt chloride, etc. (abst.), 6, 307
POTTER, W. R. Recent theories of the sulphuric acid process, - 14, 24
POUCHET, A. G. Detection of medicinal and poisonous substances in
saliva (abst.), 1, 402
Power, F. B. Analysis of mineral spring at Rosheim in Alsatia
(abst.), 1, 491
PRAETORIUS-SEIDLER, G. Cyanamide (abst.), 1, 496
PRATT, J. W. Soldering and repairing platinum vessels (abst.), 7, 150
PRECHT, H. Volumetric determination of potassium (abst.), 1, 536:
Volumetric determination of magnesium (abst.), - 1, 564
PREIS, R., and B. Raymann. Action of iodine on aromatic compounds
(abst.), 1, 393: Contributions to knowledge of cholesterine (abst.),
1, 304: Some dichromates (abst.) 2, 360

PREIS, K. See also Raymann, B. PRESCOTT, A. B. Aluminates of potassium and sodium in solution, 2, 27; Zinc oxide in alkaline solutions, 2, 29; Silver ammonium oxide in solution, 2, 32; Proportion of nitrogen found in grain and flour of different varieties of wheat, 2, 333; Analyses of vinegar, 2, 335; Test limits in examination of sugar for injurious metals, 2, 337; Estimation of nicotia in tobacco, 2, 338; Estimations of arsenic in wall paper, etc., 2, 339; Examinations of pickles for copper, 2, 340; The chemistry of nitrogen as disclosed in the constitution of the alkaloids, 9, 128; The immediate work in chemical science, 14, 190; Note on the recovery of arsenic, 14, 223; Recent advances in analytical chemistry, 15, 376; Closing address before the World's Congress of chemists, 16, 867; The periodides, 17, 775; Notes on a few pyridine alkyliodides, 18, 91; Peter Collier (obituary), 18, 748; Alkyl bismuth iodides and bismuth iodides of vegetable bases, - - - 20, 96 PRESCOTT, A. B., and S. H. Baer. Pyridine alkyl hydroxides - 18, 247 PRESCOTT, A. B., and H. M. GORDIN. Certain alkaloidal periodides and the volumetric estimation of alkaloids, etc. - - 20, 706 PRESCOTT, A. B., and P. F. Trowbridge. Periodides of pyridine 17, 859 PRESCOTT, A. B. See also Baer, S. H., Flintermann, R. F., Gordin, H. M., and Knox, J. W. T. PREUSSER, J. Determination of tungsten in tungsten alloys (abst.), 11, 53 PROCHAZKA, G. A. Probable occurence of norwegium in American lead, 2, 213; Action of phthalic anhydride on gallic acid - 4, 296 PROCHAZKA, G. A., and H. Endemann. Notes upon chicle - 1, 50 PROCHAZKA, G. A. See also Endemann, H. PROCTER, H. R. Weselsky's reaction for phoroglucinol (abst.), I, 338; Titration of free acid in tan liquors (abst.), 1, 367; Some improvements in the estimation of tannins (abst.), 6, 98; On the qualitative determination of tanning materials - - 16, 247 PROKOFIEFF. Analogies between boron and vinyl (abst.), - - 6, 158 PRUNIER, L. Hydrocarbons obtained from American petroleum - - - -PRUNIER, L., and R. David. Hydrocarbons from American petroleum (abst.), - - - - - -I, 277 PRUNIER, L., and E. Varenne. Substances contained in coke from petroleum (abst.), - - - - -PUCKNER, W. A. Improved Gooch crucible, 15, 710; Estimation of caffeine - - - - - - - - PUFAHL, O. Arseniomolybdic acid (abst.), - - -18, 978 - 6, 286 PURDIE, M. Chemical composition of milk of porpoise (abst.), 7, 290 PURGOTTI, E. Tincture of guaiacum as reagent for copper (abst.), 1,528 QUANTIN, H. Volumetric determination of sulphates (abst.), - 12, 72 Quinan, C. Convenient burette clamp, - - -16, 719 QUINAN, W. R. Physical aspects of argon. The ideal thermometrical substance for high temperatures, - - -- 17,477

QUINCKE, G. Imperviousness of glass to gases, 1, 91
RADCLIFFE, T. Analysis of rock-salt from Saltville, Virginia, 4, 255:
Analysis of deposit of zinc oxide in a blast-furnace at Longdale,
Virginia, 4, 256
RADIGUET. See Tommasi, D.
RADZISZEWSKI, B. Some new glyoxalines (abst.), - 5, 242
RAHT, A. Notes on cupro-manganese, 1, 43
RAIMAN, E. The fat contained in cochineal (abst.), - 8, 66
RAIMAN, E. The fat contained in cochineal (abst.), 8, 66 RAMDOHR, L. Preparation of charcoal for gunpowder (abst.), - 9, 190
RAMMELSBERG, C. Determination of lithium as phosphate (abst.),
1, 106: Precipitation of lithium as phosphate (abst.), 1, 335: Ves-
bium and norwegium (abst.), 2, 224 : Vanadium salt from soda
liquors (abst.), 4, 73: Gay-Lussite in soda liquors (abst.), 4, 73:
On the sesquicarbonate of potassium (abst.), 5, 66
RAMSAY, W., and J. T. Cundall. Oxides of nitrogen (abst.), - 7, 200
RAMSAY, W., and S. Young. Decomposition of ammonia by heat
(abst.), 6, 73: Method of determining vapor pressures (abst.), 7, 53
RAMSAY, W. See also Evans, F. P.
RAOULT, F. M Composition of the alkaline permanganates (abst.), 8, 272
RASINSKI, F. Fractional distillation in current of steam as a means
of investigating naphtha (abst.), 7, 33
RAU, A. Teachings of chemical valence, etc. (abst.), - 2, 291
RAU, H. M. Methods of indigo testing, 7, 16: On the estimation of
tannins, 9, 52
RAVE, P., and B. Tollens. Lactone from levulinic acid and formalde-
liyde, 15, 708
RAVE, P. See also Tollens, B.
RAWLING, C. Q. Note on a molding sand, 17, 502
RAWLINS, L. Ultramarine (abst.), 9, 210
RAWSON, C. Remarks on methods of indigo testing (abst.), - 7, 211
DANGON C. Test for tennic and (abst.), 197, 211
RAWSON, S. G. Test for tannic acid (abst.), 10, 182 RAYMANN, B. On isodulcite (abst.), 9, 111
RAYMANN, B., and K. Preis. Action of iodine on aromatic com-
pounds with long side chains (abst.), 2, 369 RAYMANN, B. See also Preis, K.
RAYNAUD, H. Determination of glycerol in wine (abst.), 2, 364: See
also Suillots, H.
RECOURA, A. See Berthelot, M.
REDWOOD, B. On viscosimetry (abst.), 8, 109
REESE, A. See Michaelis, A.
REESE, C. L. Petroleum inclusion in quartz crystals, 20, 795
REESE, L. Determination of ash (abst.), 10, 68
REFORMATSKY, S. Hydrocarbon, C <sub>8</sub> H <sub>14</sub> , obtained from allyldiethyl-
carbinol (abst.), 6, 135; 7, 60
REGELSBERGER, F. F. Compounds of uranyl chloride with ammonia
(abst.), 7, I21

REICHARDT, E. Free carbonic acid in potable water and its effect on
leaden pipes (abst.), 10, 71
REICHER, L. T. On the velocity of saponification (abst.), - 8, 83
REICHERT, E. Simplified method of testing butter (abst.), - 1, 86
REIDEMEISTER. Gay-Lussite in crude soda lyes (abst.), - 4, 73
REIFSNYDER, S. K. See Shimer, P. W.
REIMANN, M. Chromium black on wool (abst.), 1, 290
REINHARDT, C. An alcohol lamp with constant level (abst.), 6, 99:
On the numbering of porcelain crucibles (abst.), 6, 99: Melting-
point of fats (abst.), 8, 86
REINHARDT, H., and W. Staedel. Methylating and ethylating of ani-
line and toluidine (abst.), 5, 64
REINHERZ, H. See Birnbaum, K.
REINITZER, B. Error in determination of iron in presence of chro-
mium (abst.), 4, 166
REINKE, J. Reducing properties of living cells (abst.), 4, 176
REISENEGGER, H. Compounds of the hydrazines with ketones (abst.), 5, 239
REITMAIR, O. See Stutzer, A.
RÉMONT, A. Determination of total nitrogen in manures containing
nitrates (abst. 1, 1, 279, 356: Analysis of heavy mineral, fatty, and
resin oils, etc. (abst.), 2, 433: Determination of salicylic acid
(abst.), 5, 118
REMSEN, I. Oxidation of substitution products of aromatic hydro-
carbons (abst.), 1, 115, 283: Action of alcohol on diazo-compounds
(abst.), 7, 148: Oxidation of sulphamine-m-toluic acid (abst.), 2, 369
REMSEN, I., and R. D. Coale. On sinapic acid (abst.), 6, 167
REMSEN, I., and C. Fahlberg. Oxidation of substitution products of
aromatic hydrocarbons: oxidation of o-toluenesulphamide (abst.), 2, 221
REMSEN, I.; and M. W. Iles. Oxidation of xylenesulphamides
(abst.), 1, 116, 283
REMSEN, I., and E. H. Keiser. Behavior of carbon monoxide with
REMSEN, I., and H. N. Morse. Oxidation of brom-p-ethyltoluene (abst.), I, 284
RENARD, A. Products of distillation of colophony (abst.), 4, 233: Pro-
pionic acid (abst.), 8, 275: Determination of indigo on the fibre
(abst.), 9, 16
RENNIE, A. G. See Mills, E. J.
RENNIE, E. H. Action of ethyl chlorocarbonate on benzene in pres-
ence of aluminum chloride (abst.), 4, 143: Benzylphenol and
some of its derivatives (abst.), 4, 143: Benzylphenol and its de-
rivatives (abst.), 4, 204
RETTIE, T. Compounds of metallic hydroxides with iodine, - 19, 333
REVERDIN, F., and E. Nölting. The alpha and beta positions in
naphthalene (abst.), 2, 94, 132
REVERDIN, F. See also Monnet, P.

REYCHLER, A. History of ammonium silver compounds (abst.), - 6, 73
REVER, E. Solidification (abst.), 7, 244
REYNOLDS, J. E. Apparatus for liquefaction of ammonia (abst.), 4, 220
RHOUSSOPOULOS, O. Some quinoline derivatives (abst.), 5, 52: Action
of quinoline on chloroform and iodoform (abst.), - 5, 66
RIBAN, J. Transformation of starch into glucose by cold water
(abst.), 1, 271: Camphor of Borneo (abst.), 1, 277: Determination
of phosphine (abst.), 1, 372: Combination of phosphine with cu-
prous chloride, and its determination in gaseous mixtures (abst.),
1, 386 : Transformation of tricalcium phosphate into phosphorus
oxychloride (abst.), 5, 120
RICCIARDI, L. Analysis of a volcanic ash from Mt. Etna (abst.), 4,
232 : Composition of ashes from Vesuvius (abst.), 4, 237 : Compo-
sition of ripe and unripe bananas (abst.), 4, 272  RICE, C. Answer to O. Hesse (abst.), 1, 162: Apparatus for deter-
RICE, C. Answer to O. Hesse (abst.), 1, 102: Apparatus for deter-
mining solubilities, 16, 715 RICHARD, A. On the pyridine bases (abst.), 2, 89
RICHARD, A. On the pyridine bases (abst.), 2, 89
RICHARDS, Ellen H. Carbon dioxide as a measure of the efficiency of
ventilation, 15, 572
RICHARDS, Ellen H., and J. W. Ellms. The coloring-matter of natu-
ral waters, its source, composition, and quantitative measurement, 18, 68
RICHARDS, J. W. Commercial valuation of lead-tin and lead-anti-
mony alloys, 16, 541
RICHARDSON, C. Determination of reverted phosphoric acid (abst.) 4, 163
RICHARDSON, G. M. Professor August Kekulé (obituary), 18, 1107:
Victor Meyer (obituary), 19, 918
RICHARDSON, H. A. See Gill, A. H.
RICHE, A. Waters of the Bourboule (abst.), 2, 431
RICHMOND, H. D. The river Nile, 15, 34, 84: Accuracy in analysis of
dairy products, 15, 579: See also Hehner, O.
RICHTER, M. Titration of potassium dichromate (abst.), - 4, 165
RICHTER, V. von. Cinnoline derivatives (abst.), 5, 239
RICHTERS, T. Method of mixing gases in the leaden chamber pro-
cess (abst.), 4, 73
RICKETTS, P. DE P. Detection of glucose in cane-sugar, and exact
determination of cane-sugar by the polariscope, 1, 2
RIDEAL, S. See Green, A. G.
RIEDEL, C. Constitution of nitrosodimethyl-m-toluidine (abst.), 2, 171
RIETH, R. Formulae for mixing a solution of desired strength (abst.), 6, 43
RIGAUT, A. See Lescoeur, H.
RIGBY, J. S. Conversion of lime mud into cement (abst.), - 10, 91
RIGGS, W., and R. Giebermann. Determination of silicon and phos-
phorus in iron and steel (abst.), 1, 104
RILLIET, A. See Ador, E.
RIMMINGTON, F. M. Pepper adulteration and analysis (abst.), 10, 70
RINDELL, A., and F. Hannin. Kjeldahl method for nitrogen determi-
nations (abst.), 8, 81

Ris, C. Derivatives of di- $\beta$ -naphthylamine (abst.), 9, 193
Ris, C., and A. Weber. Derivatives of $\beta$ -dinaphthylamine (abst.), 6, 237
RISING, W. B., and V. Lenher. Electrolytic method for the determi-
nation of mercury in cinnabar, 18, 96
RITTHAUSEN, H. Occurrence of citric acid in seeds of leguminous
plants (abst.), 7, 30: Melitose in cotton-seed, 7, 30
RITTHAUSEN, H., and F. Weger. Betain in cotton-seed cake (abst.), 7, 58
RITZA, B. Camphor from Ledum palestre (abst.), 6, 95
RJABININ, C., and A. Saytzeff. Diallylisopropylcarbinol (abst.), - 2, 177
ROBBS, C. E. See Muir, M. M. P.
ROBERT, W. See Brunner, H.
ROBERTS, W. C., C. R. A. Wright, and A. P. Luff. Chemistry of
lesser-known alkaloids (abst.), 1, 552
ROBINET, E., and H. Pellet. Antiseptic properties of salicylic acid
(abst.), 4, 238
ROBINSON, A. E., and C. F. Mabery. Composition of mineral waters
in Northwestern Pennsylvania, 18, 915
ROBINSON, F. C. Constant level apparatus, 16, 405
ROBINSON, H. Atomic weight of cerium (abst.), 6, 306
ROBINSON, H. H. See Japp, F. R.
ROBINSON, N. Sources of error in methods of determining potash in
fertilizers, etc., 16, 364
ROCQUES, X. Action of water on zinc tanks and lead pipes (abst.), 2, 432
RODATZ, P. See Stohmann, F.
RÖDER, F. Synthesis of vinaconic acid (abst.), 7, 81: See also Fittig, R.
RÖDIGER, W. Detection of rosin oil or paraffin oil in lard, etc. (abst.), 4, 192
ROEMER, H. Anthracylamine (abst.), 4, 230
ROSMER, H., and W. Link. Nitramido- and oxymethyl-anthraquinone
(abst.), 5, 240: Amidomethylanthranol (abst.), 5, 241
ROEMER, H. See also Schunck, E.
ROESLER, L. Method for analysis of wines (abst.), 4, 189
RÖSSLER, C. Volumetric determination of manganese (abst.), 1, 329:
Lead assay in wet way (abst.), 7, 62
RÖSSLER, O. Detection of minute quantities of carbon dioxide and
other gases (abst.), 9, 200
ROHDE, G. See Miller, W. von.
ROLFE, G. W., and G. Defren. The hydrolysis of starch by acids, 18,
869: Notes on an analytical investigation of the hydrolysis of
starch by acids (note), 19, 261: Hydrolysis of starch by acids. An
apology (note), 19,679
ROLFE, G. W., and W. A. Faxon. Exact estimation of total carbohy-
drates in acid hydrolyzed starch products, 19, 698
ROLL, G., and O. Hölz. Benzyl ethers of brominated nitrophenols,
and their behavior on reduction (abst.), 7, 245
ROLLET, A. Determination of sulphur in iron, etc. (abst.), - 1, 560
ROMANIS, R. Molecular volume of some double chlorides (abst.), 6, 232
Romig, C. See Anschütz, R.

ROSCOE, SIR H. E. Study of earth-metals contained in samarskite (abst.), 4, 222: Atomic weight of carbon by combustion of dia-
mond (abst.), 4, 237
ROSCOE, SIR H. E., and A. Schuster. Spectrum of terbium (abst.), 4, 223
ROSCOE, SIR H. E., and T. E. Thorpe. Absorption spectrum of bro-
mine and iodine monochlorides, 1, 95
mine and iodine monochlorides, 1, 95 ROSELL, C. A. O. The ferrates, 17, 760
ROSENBLADT, T. Determination of boric acid (abst.), 9, 11: Separa-
tion of mercury and palladium from each other, and from lead,
copper, and bismuth (abst.), 9, 12
ROSENFELD, M. Lecture experiments (abst.), 4, 205: See also
Hönig, M.
ROSENSTIEHL, A. On article of E. and O. Fischer, on constitution of
rosaniline (abst.), 1, 271: Constitution of salts of rosaniline and
analogous coloring-matters (abst.), 2, 366, 431
ROSENSTIEHL, A., and M. Gerber. Homologous and isomeric rosani-
lines (abst.), 4, 237: On the probable number of homologous and
isomeric rosanilines (abst.), 6, 19 <sup>1</sup> ROSER, W. Terebenthic acid (abst.), 4, 227
ROSER, W. Terebenthic acid (abst.) 4, 227
Ross, B. B. Direct estimation of citrate-soluble phosphoric acid, 16,
304: Recent work on the sugars, 16, 549, 670: Analytical methods
involving the use of hydrogen dioxide, 18, 918
Rossi, A. J. New process for the manufacture of artificial ice, P. 1, 2,
74: Cyprien, M. Tessié du Motay (obituary), 2, 305: Titanium
in blast-furnaces, 12, 91: Eugène Melchior Peligot (obituary), 12,
128: On blast-furnace slags and the fusibility of silicates, 12, 189,
307: The calculation of blast-furnace slags, 12, 443
Rossolymo, A. See Gattermann, L.
ROTH, C. F. Apparatus for determining melting-points (abst.), 8, 278:
See also Ladenburg, A.
ROTH, D. M. See Norton, T. H.
ROTTEN, M. Preparation of soluble magnesia soaps (abst.), - 8, 64
Rousseau, G. Diatomic alcohol derived from β-naphthol (abst.), 4,
77: Action of chloroform on $\beta$ -naphthol (abst.), - 4, 241
ROUSSEAU, G., and B. Bruneau. Preparation of barium permanganate
(abst.), 6, 77
Roux, L. Preparation of a propyl- and an amylnaphthalene (abst.),
6, 164: Action of aluminum chloride upon bromo-, chloro- and
iodonaphthol (abst.), 8, 94: See also Barbier, P.
ROYSE, J. S. See Noyes, W. A.
RUBNER, M. Formation of fat from carbohydrates in carnivora (abst.), 8, 86
RUDOLPH, C. o-Nitrobenzaldehyde and its behavior towards nascent
hydrogen (abst.), 2, 366: See also Fischer, O.
RUEDIGER, A. P. See Cady, H. P.
RÜDORFF, F. Simple form of volumenometer (abst.), 1, 379: Deter-
mination of specific gravity of powdered bodies (abst.), 1, 395:

Determination of moisture in the air (abst.), 2, 171: Constitution
of solutions (abst.), 12, 35r
RÜGHEIMER, L. Artificial piperine (abst.), 5, 28: See also Ladenburg, A. RUFACH, C. W. See Weigelt-Rufach, C.
RUFFLE, J. Determination of total nitrogen by combustion (abst.),
Rufi, H. See Bondzynski, S.
RUNYAN, E. G., and H. W. Wiley. Determination of small quantities
of phosphoric acid by the citrate method, 17, 513 Rupp, W. On $\beta$ -phenanthrolmonosulphonic acid, 6, 155.
RUSSELL, W. H., and W. Lapraik. Spectroscopic study of chloro-
phyll (abst.), 4, 257
SAARBACH, L. Phenoxypropionic acid (abst.), 1, 296: Simple form of
gas regulator, 18, 51r
SABANÉEFF, A. Action of sulphuric acid on oleic acid (abst.), - 8, 85.
SABATIER, P. Numerical laws of the solid state (abst.), - 6, 73
SABIN, A. H. A new form of air thermometer for technical purposes, 12, 277
SACC, F. Cucurbitaceae of Uruguay (abst.), 4, 236: Chemical studies
of products of Uruguay (abst.), 4, 237
SACHSSE, R. Determination and formula of starch (abst.), 1, 546:
New coloring-matter derived from chlorophyll (abst.), 6, 133
SADTLER, S. P., and H. G. McCarter. Petrocene (abst.), - 1, 114
SAEGER, O. See Külin, B.
ST. MARTIN, L. DE. Intensity of respiration processes in a super-oxy-
genated atmosphere (abst.), 6, 129
SAKURAI, J. Metallic compounds containing bivalent hydrocarbon
radicals (abst.), 4, 258: Note on methylene chloriodide (abst.), 7, 214
SALAMON, A. G. See Hood, J. J.
SALKOWSKY, E. Examination of cod liver oil and vegetable oils
(abst.), 70
SALKOWSKY, E. and H. Salkowsky. Formation of hydrocinnamic
acid by pancreatic digestion (abst.), 1, 166: Products formed by
putrefaction of albumin (abst.), 2, 174
SALKOWSKY, H. Behavior of m-nitroanisoil towards ammonia (abst.),
1, 169: See also Salkowsky, E.
SALOMON. G. Paraxanthine (abst.), 5, 65: See also Krause, H.
SANDS, F. See Elliott, A. H.
SANFORD, P. G. Gelatine explosives, 15, 552
SARAUW, A. Action of phosgene on diazoamido compounds (abst.), 4, 175
SARRAU, E. and P. Vieille. Decomposition of gunpowder in closed
vessels (abst.), 1, 399: Heat of formation of guncotton (abst.), 2, 435
SARGENT, G. W. See Smith, E. F.
SAUER, A. Krakatoa ashes in 1883 (abst.), 6, 127
SAUER, E. New form of air-bath, 16, 31: New laboratory apparatus, 17, 494
SAUNDERS, W. M. Amphoteric reaction of milk 18, (33)
SAYTZEFF, A. Oxidation of oleic acid by permanganate in alkaline
solution (abst.) 7, 207: Oxidation of olaic and elaidic acide with

permanganate in alkaline solution (abst.), 8, 42: See also	
Rjabinin, C., Semlianitzin, A., and Schirikoff, A. SAYTZEFF, P. and A. Saytzeff. Allyldipropylcarbinol (abst.), - 2,	- 4
SCHACHERL, G. See Garzarolli-Thurnlackh, K.	54
SCHÄFER, W. Examination of some musts of 1883 for acids and sugar	
	243
SCHAFFER, F. See Nencki, M.	-43
SCHAFFER, H. A., and E. F. Smith. Tungsten hexabromide, - 18, 1	008
SCHANCHE, H. G. Hydrogen sulphide generator, 16,	
SCHATZKY, E. Action of allyl iodide, butyl iodide, and zinc, upon	000
	58
SCHAUMANN, H. Determination of albumin in urine (abst.), - 10,	_
	276
SCHEFFER, J. D. R. The diffusion of some organic and inorganic	2/0
	22
Scheibe, A. See Wildt, E.	22
	268
	368 169
	-
	494
SCHEUCH, F. C. See Stone, W. E.	
SCHEURER-KESTNER, A. Estimation of tartaric acid in argols (abst.),	
1, 102: Oxidation of soda lyes (abst.), 4, 73: Influence of the am-	
monia soda process on the value of hydrochloric acid and chlorine	
(abst.), 6, 174: Notes on the soda industry (abst.), 6, 174: Com-	
position of gaseous products in combustion of pyrites, and in-	
fluence of Glover's tower on manufacture of sulphuric acid (abst.),	
7, 124: Experiments on the industrial value of Thompson's	0
calorimeter (abst.), 10,	89
Schiff, H. Digallic acid (abst.), 1, 161: Analysis of organic sub-	
stances containing the halogens or nitrogen (abst.), 1, 254, 337:	
Determination of acetyl by means of magnesia (abst.), 1, 547:	
Oxychloride and chlorides of tungsten (abst.), 2,	
SCHIRIKOFF, A., and A. Saytzeff. Allyldiethylcarbinol (abst.), 2,	
SCHLAGDENHAUFFEN, F. C. Delicacy of reaction for magnesia (abst.), 1,	96
SCHMID, H. See Goldschmidt, H.	
SCHMIDT, E. Identity of mercurialine with methylamine (abst.),	
1, 100: Contributions to history of methylcrotonic and angelic	
acids (abst.), 1, 396: Contributions to knowledge of daturine	
(abst.), 2, 370: Examination of certain musts for sugar and acid	
(abst.), 7,	63
SCHMITT, C. Detection of Fahlberg's "saccharin" (abst.), - 9,	201
SCHMITT, C. E. Determination of fatty acids in oils (abst.), - 6,	100
	493
SCHMITT, R., and A. Goldberg. Action of chloride of lime on ethyl	
	496
Schmoeger, M. Isomalic acid (abst.), 1,	295

SCHMUCKER, S. C. Electrolytic separation of the metals of the second	
group, 15	, 195
SCHNEIDER, E. A. See Clarke, F. W.	
SCHNEIDER, R. Behavior of arsenical bismuth with nitric acid, etc.	
(abst.), 2, 136: Action of sulphur chloride on silver cyanide (abst.),	, 201
SCHOBER, J. B. Volumetric determination of zinc (abst.),	
SCHÖNE, E. Hydrogen peroxide and potassium iodide (abst.), 1, 250:	
Estimation of hydrogen peroxide (abst.), 1, 321: Hydrogen per-	
oxide (abst.), 2, 50, 59	, 181
SCHOLVIEN, L. Derivatives of mercury fulminate (abst.), - 7	
Schoop, P. See Hell, C.	
SCHORLEMMER, C. See Dale, R. S.	
	r, 563
SCHOTTEN, C. Contributions to knowledge of piperidine (abst.), 4, 262:	, 0 3
- 44 4 4 44 44 4	5, 133
Schreder, J. See Barth, L. von.	, -33
SCHREINER, L. Boiling-points of ethereal salts of alkyloxy- and hy-	
droxy- acids (abst.), 1, 290: Boiling-points of esters and ether-	
esters of oxacids (abst.), 2, 174 : See also Damm, G.	
SCHRODT, M. Presence of nitrates and nitrites in milk, an evidence of	
	9, 13
SCHRÖDER, H. Additions to the law of volumes (abst.), I, 168:	, 3
Volume constitution of sulphates, selenates, and chromates of	
magnesium metals (abst.),	. 492
SCHRÖDER, M. Indicator for volumetric determination of zinc (abst.),	
SCHÜPPHAUS, R. C. Alcohols of fusel oil, 14	
SCHÜTT, F. p-Brom-o-amidophenol (abst.), 7, 246: Bromamidophe-	r, 43
nols (abst.),	, 246
SCHÜTZENBERGER, P. Note on a recent work of B. Aronheim (abst.),	
Schützenberger, P., and A. Colson. On silicon (abst.),	
	, 294
SCHULTZ, G. Constitution of phenanthrene (abst.), 1, 395; 2, 45: See	, - 54
also Anschütz, R.	
SCHULZ, H. Action of mono- and diphenylarsenic acid on the animal	
organism (abst.), 1, 159: Action of dimethylarsenic acid on the	
animal organism (abst.), 1, 160: The action of acid chlorides and	
	, 19
Schulz, J. See Frühling, R.	, - 9
Schulze, B. See Weiske, H.	
Schulze, E. Specific rotation of isocholesterin (abst.), 1, 380, 395:	
Separation of asparagine from solution (abst.), 5, 63: Practicabil-	
ity of Schlösing's ammonia estimation process for plant extracts	
(abst.), 6, 41: See also Planta, A. von.	
SCHULZE, E., and J. Barbieri. Decomposition of albuminoids in pump-	
	2, 136
	, 95
SCHULZE, K. E. Phorone from glycerol (abst.), 4, 176: High boiling	, ,

phenols from coal tar (abst.), 7, 120: Occurrence of carboxylic
acids in coal tar (abst.), 7, 249
SCHULZE. See Hartmann.
SCHUNCK, E., and H. Roemer. Detection of alizarin, isopurpurin,
and flavopurpurin, and quantitative determination of alizarin
(abst.), 2, 95
SCHUSTER, A. See Roscoe, Sir H. E.
SCHWAB, J. See Hess, F., and Medicus, L.
Schwalb, F. Non-acid components of beeswax (abst.), - 8, 229
SCHWANERT, H. Large crystals in urine (abst.), 4, 174
SCHWARTZ, D. See Noyes, A. A.
SCHWARZ, H. Lecture experiments with zinc dust and sulphur (abst.), 5, 53
Schweinitz, E. A. von. Chemical products of bacterial growth and
their physiological effects, 13, 61: See also De Schweinitz, E. A.
Schweitzer, H. New weighing apparatus, 15, 190
Schweitzer, H., and E. Lungwitz. New muffle for incineration of
sugar, 16, 151
Schweitzer, P. Action of impure rain-water on lead pipes, P. 1, 66:
Cause of discrepancies in estimating silver in pig lead, P. 1, 67:
Analysis of the gneiss of Manhattan Island, P. 1, 69: Some new
acid ammonium sulphates, P. 1, 88
SEAL, A. N. Action of acid amides upon benzoin, 18, 101
SEELHEIM, F. On the volatilization of platinum in chlorine gas, - 1, 479
SEIDEL, P. Triphenodioxazine by oxidation of orthoamidophenol
(abst.), 12, 162
Sell, W. J. Volumetric determination of chromium (abst.), - 1, 324
SELMI, F. Reaction for strychnine (abst.), 1, 341: Behavior of strych-
nine with iodic acid (abst.), 1, 545: Alkaloids found in the human
cadaver (abst.), 1, 554: Modification of Schneider's process for
separation of arsenic in toxicological investigations (abst.), 1, 555
Semlianitzin, A., and A. Saytzeff. Oxyvalerianic acid from allyldi-
methylcarbinol (abst.), 2, 178
SEMMLER, F. W. Indian geranium oil (abst.), 12, 234
SENDERENS. See Filhol, E.
SENDTNER, R. New uranyl salts (abst.), 1, 255
Senf, A. Cyananiline and some of its derivatives (abst.), 7, 207
SERRANT, E. Rosolene (abst.), 8, 56
Sestini, F. Determination of albuminoids in food for cattle (abst.),
1, 565: Response to the reclamation of Vincent and Delachanal
(abst.), 6, 37
SETTEGAST, H. Contributions to quantitative spectrum analysis
(abst.), 1, 374
SEUBERT, K. Atomic weight of iridium (abst.), 1, 320
SEUBERT, K., and K. Kobbé. Constitution of some double salts of
rhodium (abst.), 12, 472
SEUBERT, K., and G. Link. Analyses of nephrites from lake dwellings
(abst.), 4, 206
1)

SEUBERT, K., and W. Pollard. Vapor-density and melting-point of
cyanogen iodide (abst.), 12, 225
cyanogen iodide (abst.), 12, 225 SEXTON, A. H. Determination of arsenic in copper (abst.), - 4, 167
SEYDA, A. Sulphonic acids of quinol (abst.), 5, 239
SEYDA, A. Sulphonic acids of quinol (abst.), 5, 239 SEYFERT, F. Starch iodide (abst.), 10, 188
SEYLER, C. A. On the determination of the number of atoms in a
molecule (abst.), 6, 47
Sharp, J. Some of the modes of treating cotton goods practiced by
Lancashire and Yorkshire dyers (abst.), 6, 142
Sharwood, W. J. Notes on estimation of cyanogen by silver nitrate, 19, 400
Shaw, S. On the preparation of pentathionates (abst.), - 5, 233
SHEARER, A. See Giles, W. W.
SHENSTONE, W. A. Alkaloids of Nux vomica, (II). Brucine (abst.),
5, 95; Modified Liebig's condenser (abst.), 5, 97: Experiments
on strychnine (abst.), 7, 116 Shenstone, W. A., and J. T. Cundall. Influence of temperature on
the composition of hydrated calcium sulphate (abst.), 10, 78
SHEPARD, C. U. Development and extent of the fertilizer industry, 15, 321
SHEPHERD, J. W. See Noyes, W. A.
SHERMAN, H. C. Determination of nitrogen in fertilizers containing
nitrates, 17, 567: Insoluble carbohydrates of wheat 19, 291
SHIMER, P. W. Carbon in steel (report), 15, 283; Determination of
iron by titration with stannous chloride (report), 15, 396; Deter-
mination of silica in blast-furnace slag, 16, 501: Determination of
zinc, 17, 310; Determination of graphite in pig iron 17, 873
SHIMER, P. W., and S. K. Reifsnyder. Some experiments on samp-
ling by quartation, 15, 260: See also Drown, T. M.
SHIMIDZU, T. See Divers, E.
SHIMOSÉ, M. Separation of selenium and tellurium, and their prepa-
ration from lead-chamber deposit (abst.), 6, 47: See also Divers, E.
SHINN, O. L. See Smith, E. F.
SHIVER, F. S. Standardization of sulphuric acid 17, 351
SHOCK, H. L. See Starke, F. W.
SHOREY, E. C. Two sources of error in sugar house analyses, 18,
462: The principal amide of sugar-cane, 19, 881: The lecithins of
sugar-cane, 20, 113: Additional notes on the sugar-cane amide, 20, 133
SIEBER, N. Antiseptic action of acids (abst.) 1, 496
SIEGFRIED, C. A. Note on Bütschli's experimental imitation of pro-
toplasm 12, 298
SIEGFRIED, L. See Albert, H.
SIEGFRIED, M. Oxidation of phenol by means of nitrobenzene
(abst.), 7, 207
SIENIER, A., and G. Lowe. Test for glycerol (abst.) - 1, 339
SILBER, P. See Ciamician, G. L.
SILLIMAN, B. Dr. John Lawrence Smith (obituary), 5, 228
SILVA, R. D. On the synthesis of diphenylethane (abst.), - 6, 191

SMITH, E. F., and H. L. Dieck. A crystalline chromium tungstate, 15, 151
SMITH, E. F., and H. B. Harris. Electrolytic determination of
ruthenium, 17, 652: Action of phosphorus pentachloride upon
the dioxides of zirconium and thorium, 17, 654
SMITH, E. F., and J. G. Hibbs. Action of hydrochloric acid gas upon
sodium vanadate, 16, 578: Action of hydrochloric acid gas upon
salts of the elements of group V of the periodic system - 17, 682
SMITH, E. F., and V. Lenher. Action of ammonia gas on molybdenyl
chloride, 15, 61
SMITH, E. F., and P. Maas. Atomic weight of molybdenum - 15, 397
SMITH, E. F., and J. M. Matthews. Uranium oxynitride and uranium
dioxide 17, 686
SMITH, E. F., and F. L. Meyer. Action of haloid acids in gas form
upon the salts of elements of group V of the periodic system, 17, 735
SMITH, E. F., and J. B. Moyer. Electrolytic separation of mercury
from bismuth, 15, 28: Electrolytic separations 15, 101
SMITH, E. F., and V. Oberholtzer. Action of the haloid acids upon
molybdic acid, 15, 18: Action of gases upon metallic molyb-
denum and tungsten, 15, 206
SMITH, E. F., and Gertrude K. Peirce. Products from nitration of
metachlorsalicylic acid (abst.), 1, 288: Products of nitration of
metachlorsalicylic acid (abst.), 2, 94
SMITH, E. F., and G. W. Sargent. Action of phosphorus pentachlo-
ride upon molybdenum trioxide 16, 425
SMITH, E. F., and O. L. Shinn. Action of ammonia gas on wolframyl
chloride, 15, 68: Action of molybdenum dioxide upon silver salts, 16, 569
SMITH, E. F., and H. E. Spencer. Electrolytic separations, - 16, 420
SMITH, E. F., and D. L. Wallace. Electrolytic separation of copper
from antimony, 15, 32: Double bromides of palladium, 16, 465:
Electrolytic separations, 17, 612: Electrolytic estimation of mer-
cury, 18, 169: Electrolytic determinations, 20, 279
SMITH, E. F. See also Atkinson, Elizabeth, A., Benkert, A. L.,
Field, C., Hibbs, J. C., Kelley, J., Lenher, V., Schaffer, H. A.,
Starke, F. W., Taggart, W. T., and Wallace, D. L.
SMITH, E. L. Rapid measuring pipette, 18, 905
SMITH, I. J. See Norton, T. H.
SMITH, J. D. See Teschemacher, E. F.
SMITH, J. G. See Herty. C. H.
SMITH, J. H. See Lunge, G.
SMITH, R. A. Detection of fire-damp (abst.), 1, 367
SMITH, W. Color reactions for aromatic hydrocarbons, etc. (abst.),
1, 544: Note on pentathionic acid in connection with Shaw's
paper (abst.), 5, 234: Analysis of tars recovered in coking of coal,
and in condensation of fuel gases from blast furnaces (abst.),
6, 25 : Examination of tar from Sutherland's gas producers (abst.),
6, 31 : By-products obtained in coking coal in the Simon-Carvés
ovens (abst.), 7, 212: On wool and fur (abst.), 10, 184

SMITH, W., and G. W. Davis. Compounds of naphthalene and ben-
zene with antimony trichloride (abst.), 5, 60: On the constitution
of quinoline (abst.), 5, 61
SMITH, W., and T. Liddle. Loss of soda by formation of Gay-Lussite
(abst.), 4, 74
SMITH, W., and T. Takamatke. Pentathionic acid (abst.), - 4, 199
SMITH, W. See also Claparède, A.
SMITH, W. F. Cider and vinegar, 7, 102
SMITT, A. See Petterson, O.
SNYDER, H. Error in the determination of nitrogen by the Kjeldahl
method, 13, 212: Notes on Löwenthal's method for determination
of tannin, 15, 560: Notes on the Grandeau method for the deter-
mination of humus in soils, 16, 210: Action of organic and mineral
acids upon soils, 17, 148: The composition of humus, - 19, 738
Sohon, M. D. Electrical laboratory stove, 19, 790
Solly, R. H. Crystallographic examination of antimony potassium
chlorobromide (abst.), 5, 114
Sommaruga, E. von. Molecular weight of indigo (abst.), - 1, 254
Sommer, A. Review of the methods of preparing hydrobromic acid,
etc. (abst.), 6, 32: Converting sulphides into sulphates by means
of nitric and hydrobromic acids (abst.), 6, 33
SOMMERKORN, H. New method to determine specific gravity of a
liquid (abst.), 2, 171
Sondén, K. Hygienic analysis of air (abst.), 9, 219
Sonnenschein, A. Drying of fats (abst.), 8, 279
SORABJI, K. B. New paraffins (abst.), 7, 66
SORET, J. L. Ultra-violet absorption spectrum of liquids (abst.), - 1, 94
SOROKINE, V. Oxidation of diallyl, and the hexyl glycol derived
from it (abst.), 1, 272
Soubeiran, J. L. An Irvingia from Cochin China, and the fatty
matter contained (abst.), 8, 110
Southworth, R. I. Relations of volumes of solutions of hydrated
salts to their water of composition (abst.), 1, 392
SOXHLET, F. Reducing effect of different kinds of sugar on alkaline
copper solutions (abst.), 1, 342: Gravimetrical determination of
fat in milk (abst.), 1, 358: Testing milk for addition of water
(abst.), 8, 232
SPENCER, A. E. See Dennis, L. M.
SPENCER, G. L. Air drying oven, 15, 82: Notes on caffeine, - 19, 279
SPENCER, H. E. See Smith, E. F.
SPENZER, J. G. Behavior of allylmalonic, allylacetic, and ethylidene-
propionic acids when boiled with caustic soda solutions, - 17, 1
SPEYERS, C. L. Heats of solution of some carbon compounds, 18, 146:
Some thoughts about liquids, 18, 724: Molecular weights of some
carbon compounds, a few words more, 20, 546: Osmotic pressure, 20, 579
SPIEGEL, L. Determination of nitric acid, etc. (abst.), - 12, 353

SPIEGELBERG, L. Nitro-, amido-, and bromobenzenesulphonic acids (abst.), 2, 186 : See also Heinzelman, R.
SPILKER, A. See Kraemer, G.
SPITZER, F. V. Camphor chlorides (abst.), 2, 60
SPRING, W. Formation of alloys by pressure (abst.), 4, 269: Expan-
in Color (1.4) The state of the color of the
sion of alums (abst.), 5, 27: Formation of arsenides by pressure
(abst.), 5, 68: Heat disengaged by the compression of solid bodies
(abst.), 6, 190 : Quantities of sulphides found by compressions of
their elements (abst.), 6, 190: Differential dilatometer and its use
in examinations on formation of alums (abst.), 7, 77: Expansion
of alums (abst.), 7, 77: Specific heat of alloys of lead and tin
(abst.), 8, 19; : A new acid of tin (abst.), 10, 187
Spring, W., and G. de Boeck. On an oxide of manganese soluble in
water (abst.), 9, 99: A colloidal copper sulphide (abst.), - 9, 110
SPRING, W., and E. Bourgeois. Formation of sulphuric acid during
the preparation of dithionic acid (abst.), 8, 177
SPRING, W., and A. Lecrenier. Relative activity of the halogen de-
rivatives of sulphur (abst.), 8, 164: On the constitution of the
chlorinated ethyl bisulphide of Guthrie (abst.), 10, 15: Action of
chlorine on the sulphides of alcohol radicals (abst.), 10, 16
SPRING, W., and C. Winssinger. Action of chlorine on sulphonic
compounds, etc. (abst.), 4, 263: Action of chlorine on organic sul-
phur compounds (abst.), 6, 133
Springer, A. On glychocolic ether (abst.), 1, 289: A tribute to Pas-
( 1 1 1 )
teur (obituary), 17, 1000: Analyses of distilled waters, - 20, (46)
teur (obituary), 17, 1000: Analyses of distilled waters, - 20, (46) SOUBB, E. R. Determination of alkaloids in cinchona bark (abst.).
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.).
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.). 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126:
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.). 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro-
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.). 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), 2, 171
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Malogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Malogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H.
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Malogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Malogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Malogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils (abst.), 8, 85 STAHL, K. F. Hydrofluoric acid,
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils (abst.), 8, 85 STAHL, K. F. Hydrofluoric acid, 8, 85 STAHL, K. F. Hydrofluoric acid, 18, 415
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils (abst.), 8, 85 STAHL, K. F. Hydrofluoric acid, 8, 85 STAHLSCHMIDT, C. Contributions to knowledge of polyporic acid (abst.), 1, 258
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils (abst.), 8, 85 STAHL, K. F. Hydrofluoric acid, 8, 85 STAHL, K. F. Hydrofluoric acid, 18, 415
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils (abst.), 8, 85 STAHL, K. F. Hydrofluoric acid, 8, 85 STAHLSCHMIDT, C. Contributions to knowledge of polyporic acid (abst.), 1, 258
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils (abst.), 8, 85 STAHL, K. F. Hydrofluoric acid, 8, 85 STAHL, K. F. Hydrofluoric acid, 18, 415 STAHLSCHMIDT, C. Contributions to knowledge of polyporic acid (abst.), 1, 258 STARKE, F. W., H. L. Shock, and E. F. Smith. Constitution of ar- senopyrite,
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils (abst.), 8, 85 STAHL, K. F. Hydrofluoric acid, 8, 85 STAHL, K. F. Hydrofluoric acid, 18, 415 STAHLSCHMIDT, C. Contributions to knowledge of polyporic acid (abst.), 1, 258 STARKE, F. W., H. L. Shock, and E. F. Smith. Constitution of arsenopyrite, 19, 948 STAS, J. S. Preparation of pure hydrobromic acid (abst.), 8, 81
SQUIBB, E. R. Determination of alkaloids in cinchona bark (abst.), 4, 193: Assay of opium (abst.), 4, 194: Absolute alcohol, 15, 126: Automatic zero burette, 16, 145: Improvement in the manufacture of acetone, 17, 187: Manufacture of acetone and acetone-chloro- form from acetic acid, 18, 231, (30): Volumetric determination of acetone, 18, 1068: Improved specific gravity bottle or pyknometer, 19, 111 STAATS, G. Derivatives of o- and p-toluidine (abst.), - 2, 171 STÄDEL, W. Halogen substitution products of ethane (abst.), - 1, 246 STÄDEL, W. and E. Hahn. Apparatus for regulation of pressure in distillations, etc. (abst.), 1, 250 STAEDEL, W. See also Reinhardt, H. STAHL, J. C. Apparatus for determination of fluidity of mineral oils (abst.), 8, 85 STAHL, K. F. Hydrofluoric acid, 8, 85 STAHL, K. F. Hydrofluoric acid, 18, 415 STAHLSCHMIDT, C. Contributions to knowledge of polyporic acid (abst.), 1, 258 STARKE, F. W., H. L. Shock, and E. F. Smith. Constitution of ar- senopyrite,

colors, 1, 465: Action of benzotrichloride on primary amines, 1,
524 : Some new azo-compounds (abst.), 2, 95: Action of bromanile
on secondary and tertiary monamines, 2, 109: Substituted
tolyl compounds, 2, 199: New coloring-matters, produced by the
action of diazo-compounds on phenols, 2, 236: Some new azo-
colors, 2, 446: New azo-colors belonging to the tetrazo group, 3,
20: A slight modification of the Wilkinson eudiometer, 3, 36:
Some new facts concerning thymole sulpho-acid, and some of its
salts, 3, 103: New salts of alpha-thymole sulpho-acid, etc., 3, 110:
Combination of diazo-compounds with alpha-thymole sulpho-acid,
3, 112: Preparation of artificial indigo and some of its derivatives,
4, 81: Analysis of galena from Newburyport, Mass., 4, 214: Anal-
ysis of pyrrhotite from Clayton, New York, 4, 214: Action of
phthalic anhydride on gallic acid, 4, 244: Action of diazoanisole
chloride upon phenoles, 5, 32, 55: Spectra of azo-colors, 6, 117,
149: Action of diazo-β-naphthalene on phenols, 6, 151: Spectro-
scopic examination of Lauth's violet and methylene blue, 6, 304:
New green coloring-matter from benzylmethylaniline, 7, 40: Ben-
zylmethylaniline, 7, 42: Estimation of nitrogen in aromatic com-
pounds by the Kjeldahl method, 7, 108: "Lalande-Spence" pri-
mary battery, 7, 195: Preliminary notice upon the action of benz-
aldehyde on commercial xylidine, 8, 173: On the efficacy of Brey-
er's "micro-membrane" filter, 8, 192: A new method of estimating
coloring-matter in butter and its substitutes, 9, 41: Relative value
of different pepsin tests, 10, 51: Action of sulphuric acid on hy-
drochinon, etc., 13, 155: Examination of an unusual form of
spring water, 14, 115: Estimation of potassium iodide and sodium
acetate in complex organic mixtures, 16, 157
STEIN, G. Determination of water in Turkey-red oil (abst.), - 1, 367
STEINER, J. Ammoniacal copper test of Pavy (abst.), 1,547 STELLWAY, A. Composition of barley fat (abst.), 8,274
STELLWAY, A. Composition of barley fat (abst.), 8, 274 STEPHENS, C. W. Determination of milk sugar in milk (abst.), - 8, 205
STERN, D. Hydrazobenzene and benzidine (abst.), 7, 59
STEUDEMANN, H. m-Nitrophenyl mustard oil (abst.), - 5, 128
STILLMAN, T. B. Analysis of lubricating oils, 15, 265: Chemical and
physical examination of Portland cement, 15, 181: 16, 161, 283,
323, 374: Solubility of bismuth sulphide in sodium sulphide, etc.,
18, 683: Action of nitric acid upon aluminum and the formation
of aluminum nitrate, 19, 711
STILLWELL, C. M. Occurrence of vanadium in American hematites,
etc., P. 1, 84: Estimation of precipitated or reduced phosphoric
acid in superphosphates, P. 2, 64
acid in superphosphates, P. 2, 64 STILLWELL, C. M., and T. S. Gladding. Acetate of lime, manufac-
ture, and analysis, 4, 94
STINGL, J. Technical valuation of quick-lime (abst.), - 1, 559
STINGL, J., and T. Morawski. Recovery of sulphur from sulphur di-
oxide and hydrogen sulphide (abst.), 2, 289

STOCKMEIER, H. Adulteration of linseed oil with rosin oil, etc. (abst.), 8, 28
STODDARD, J. T. Demonstration of the flashing-point of kerosene, 5,
53: New balance for first year's work in general chemistry, - 18, 189
STODDART, W. W. Logwood test for alum in bread (abst.), 1, 566:
New pepper adulterant (abst.), 10, 195
STOHMANN, F. Calorimetric method (abst.), 1, 295: Thermo-chem-
ical relations of the acids and alcohols of the aliphatic series (abst.), 8, 82
STOHMANN, F., and P. Rodatz. Heat of combustion of the fatty acids
(abst.), 8, 83
STOKES, A. W. Asbestos tiles for combustion furnaces (abst.), 10, 68
STOKES, A. W., and R. Bodmer. Determination of mixtures of milk
sugar and cane-sugar (abst.), 7, 149
STOKES, H. N. Metaphosphinic acids, 18, (90): Chloronitrides of
phosphorus, 19, (43): Metaphosphinic acids, 20, (67)
STOKLASA, J. Estimation of water in superphosphates (abst.), 12, 412
STOLBA, F. Lead oxalate for standardizing permanganate (abst.), 1, 586
STOLBA, [M.] Determination of alkali in silver nitrate (abst.), - 4, 165
STONE, G. C. Determination of zinc as pyrophosphate, 4, 26: Volu-
metric determination of zinc, and a new indicator for ferrocyanide,
17, 473: Remarks on Auchy's paper on the volumetric determina-
tion of manganese, 18, 230, (30): Probable production of perman-
ganate by direct combustion of manganese, 18, 230, (30): Solubil-
ity of bismuth sulphide in alkaline sulphides, 18, 1091
STONE, G. C., and D. A. Van Ingen. Ferrocyanides of zinc and man-
ganese, 19, 542
STONE, W. E. Carbohydrates of the sweet potato (abst.), 12, 351:
Relation of teaching to research in chemistry, 15, 665: Comparison
of methods for the determination of starch, 16, 726: Quantitative
determination of carbohydrates in food-stuffs, 19, 183, 347
STONE, W. E., and W. H. Baird. Occurrence of raffinose in American
sugar beets, 19, 116
STONE, W. E., and F. C. Scheuch. Method for determining calcium
oxide in quicklime, 16, 721 STONE, W. E., and H. E. Wright. Notes on taka-diastase, - 20, 639
STONE, W. E., and H. E. Wright. Notes on taka-diastase, - 20, 639
STORCH, L. Action of ammonium salts on glycerol (abst.), - 8, 273
STRASBURGER, J. On p-amidofluorene (abst.), 6, 86
STREATFIELD, F. W. See Japp, F. R.
STRECKER, W. See Lippmann, E.
STRIEDINGER, J. H. Detonating submerged nitroglycerine com-
pounds by means of concussion, P. 1, 2, 2
STROMAN, A. Crystallized mercurous iodide and bromide (abst.), 9, 209
STROMEYER, A. Determination of acetic acid in crude pyrolignate of
lime (abst.), 1, 367, 582
STUART, C. M. Condensation products formed by benzaldehyde with
malonic and isosuccinic acids (abst.), 5, 237
STUART, T. W. The Tees salt industry (abst.), 10, 159
STÜNKEL, C. On daphnetin (abst.), 1, 167

STUTZER, A. Albuminoids (abst.), 2, 225
STUTZER, A., and O. Reitmair. Determination of nitrogen in fertil-
izers containing nitrates (abst.), 9, 13
STUTZER, J. See Isbert, A.
SUIDA, W. See Liechti, L.
SUILLOTS, H., and H. Raynaud. Manufacture of iodoform (abst.), 10, 189
SUMMERS, B. S. Carbon determinations in pig iron, 18, 1087
SUTHERLAND, D. A. Note on saccharin (abst.), 9, 217
Swain, R. E. See Young, S. W.
SZILASI, J. See Grittner, A.
SZYMANSKI, F. Allylsulphuric acid and some of its salts (abst.),
7, 208 : See also Deichmüller, A.
TAFEL, J., and C. Enoch. Formation of alkyl derivatives of amides
(abst.), 12, 159
TAFEL, J. See also Fischer, Emil.
TAFFE, H. Detection of salicylic acid in foods (abst.), - 9, 15
TAGGART, W. T., and E. F. Smith. Separation of manganese from
tungstic acid, 18, 1053
TAKAMATKE, T. See Smith, W.
TAKAYAMA, J. See Mills, E. J.  TAKAYAMA, J. On Japanese tea and tobacco (abst.,) 6, 312
TALBOT, H. P., and A. G. Woodman. Analysis of an iron rail taken
from a gallery of an unused coal mine, 19, 9 TALBOT, H. P. See also Fay, H.
TAMM, A. Determination of phosphorus in iron and iron ores (abst)., 6, 193
TAMMANN, G. Detection and determination of fluorine (abst.), 7, 295
TANATAR, S. Preparation of dioxyfumaric acid (abst.), 2, 172; Maleic
and malic acids from $\alpha$ -dibrompropionic acid (abst.), 2, 172
TANRET, C. Proximate principles of the bitter orange (abst.), 8, 202:
The sugars of hesperidin and isohesperidin (abst.), - 10, 79
Tassin, W. New blowpipe reagent, 19, (24): Preparation of crys-
tals, 20, (3)
TATLOCK, R. R. Determination of nitric nitrogen in guano (abst.), 1, 355
TATTERSALI, J. New test for papaverine (abst.), - 1, 545
TATTERSALL, T. Test for cobalt (abst)., 1, 109
TENNILLE, G. F. Phosphomolybdic test as applied to lard analysis,
17, 33: Determination of solid fats in compound lards, - 19, 51
Terne, B. Legislation on fertilizer analysis, 10, 2
TERREIL, A. Analysis of metallic fragments from Peruvian sepulchres
(abst.), 1, 276: Atomic weight of aluminum (abst.), 1, 277, 321;
Determination of fusing-points (abst.), 1, 375
TERREIL, A., and A. Wolff. Resin of rose-wood (abst.), 2, 431
TERREIL, H. Some peculiarities of commercial orpine and on depila-
tion of hides (abst.), 8, 97
TESCHEMACHER, E. F., and J. D. Smith. Estimation of phosphoric
acid for commercial purposes (abst.), 1, 353: Determination of
morphine in opium (abst.), 10, 45

TEXTOR, O. See GABBA, L.
THAYER, E. F. See Cameron, F. K.
THENARD, P. On black phosphorus (abst.), 4, 272
THIERCELIN, L. Preparation of ashes for extraction of iodine from
seaweeds (abst.), 2, 434 THOLLON, I New compound prism (abst.), 1, 172
THOMAS, C. Detection of Bordeaux red in wines (abst.), 4, 191
THOMAS, E. G. P. See Witt, O. N.
THOMAS, J. W. Analysis of combustible gases (abst.), 1, 372
THOMAS, W. S. Methods for the determination of manganese - 17, 341
THOMPSON, C. See Wright, C. R. A.
THOMPSON F. See Campell, E. D.
THOMPSON, G. R. See Bothamley, C. H.
THOMPSON, W. P. The patent law (English) as amended in 1883
(abst.), 6, 26: On Rave's process for the utilization of acid tar
residues of petroleum manufacturers (abst.), 10, 93
THOMSEN, J. Thermochemical investigations (abst.), 1, 293: Action
of hydrogen sulphide on cupric salts (abst.), 1, 332: Heat of for-
mation of cuprous chloride (abst.), 2, 171: Heat of formation of
cyanogen (abst.), 2, 171: Refraction and heat of combustion
(abst.), 4, 176; Heats of combustion of benzene, dipropargyl and
acetylene: constitution of benzene (abst.), 4, 229
THOMSEN, T. Researches on the composition of wood (abs.), 1, 295;
Optical rotation of malic acid, etc. (abst.), 4, 263
Thomson, A. C. Substitute for gas in blast-lamp (abst.), 1, 91
Thomson, J. A new antiseptic soap (abst.), 10, 92
THOMSON, J. M., and W. P. Bloxam. Crystallization from saturated
solutions of compound salts (abst.), 4, 261
THOMSON, J. S. Preparation of distilled water free from ammonia
(abst.), 1,586
THOMSON, R. T. Use of rosolic acid, methyl orange, etc., as indi-
cators (abst.), 6, 49, 242
THOMSON, W. See Allen, A. H.
THORÉ. New saccharimeter (abst.), 1, 92
THORNE, L. T. Apparatus for fractional distillation under reduced
pressures (abst.), 5, 114: Industrial applications of oxygen
(abst.), 10, 197
THORPE, T. E. Heptane from Pinus sabiniana (abst.), 1, 286: Zinc,
magnesium, and iron, as reducing agents with ferric salts (abst.),
4, 223; Action of oxychlorides of sulphur on silver nitrate (abst.), 4, 223
THORPE, T. E., and S. Dyson. Action of thiophosphoryl chloride on
silver nitrate (abst.), 4, 224
THORPE, T. E., and J. I. Watts. Specific volume of water of crystal-
lization (abst.), 2, 350
THORPE, T. E. See also Roscoe, Sir H. E.
THRESH, J. C. Estimation of small quantities of alcohol (abst.), I,
End: Analysis of Ruyton thermal water (abst.) 4 170

Tibiriçá, J. See Merz, V.
TIDY, C. M. Determination of organic purity of waters (abst.), 1, 106:
See also Crookes, W.
TIEMANN, F. Aromatic amido-acids (abst.), 2, 370; Action of hy-
droxylamine on nitriles (abst.), 6, 160: Behavior of amidoximes
and azoximes (abst.), 8, 75: See also Baumann, E., and De-
Laire, G.
TIMCKE T. Action of amines on quinone (abst.), 8, 23
TLEISNER, F. See Fleissner, F.
TLINSKI, M. Action of ammonia on nitrosophenols (abst.), 7, 86:
Separation of nickel and cobalt (abst.), 7, 250
TOBIAS, G. Behavior of alkaline phosphates towards some indicators
(abst.), 5, 53
TODD, A. M. Treatment and distillation of peppermint plants (abst.), 10, 117
TÖNNIES, P. Action of nitrosyl chloride on unsaturated hydrocarbons
(abst.), 1, 170
TOLLENS, B. Ammoniacal alkaline silver solution as reagent for
aldehyde (abst.), 5, 50
TOLLENS, B., H. Hosäus, P. Rave, and P. Wigand. Synthesis of
polyhydric alcohols by means of formaldehyde 15, 704
TOLLENS, B., P. Wigand, and P. Rave. Pentaerythrol - 15, 706
Tollens, B. See also Allen, E. W., Deichmüller, A., Gunther, A.,
Herrmann, P., Kent, W. H., and Rave, P.
TOMICEK, F. See Brauner, B.
TOMMASI, D. Determination of ozone in the air (abst.), 4, 162: Heat
of formation of soluble fluorides (abst.), 6, 74: Note on non-
existence of ammonium hydroxide (abst.), 6, 189: Electrolysis
of a few chemical compounds (abst.), 8, 19
TOMMASI, D., and Radiguet. Battery with elements of coal without
and on the second of the secon
TOPF, G. Iodometric studies (abst.), 9, 33 TORNÖE, H. Results of Norwegian North Sea expedition (abst.),
1, 496 ; <b>2</b> , 289
Tóтн, J. Determination of phenol in crude carbolic acid (abst.), - 8, 79
TRAUB, M. C. Action of phthalic anhydride on quinoline (abst.), 5, 67
Traube, J. See Bodländer, G.
TRAUBE, M. Production of active oxygen (abst.), 4, 207; 5, 19:
Behavior of platinum or palladium towards carbon monoxide or
hydrogen in presence of oxygen and water (abst.), 5, 62
TRESKOW, H. Apparatus for measuring sterilized solutions (abst.), 9, 123
TREVOR, J. E. Fundaments of chemical theory, 15, 430: The achieve-
TREVOR, J. E. Fundaments of chemical theory, 15, 430: The achieve-
ments and aims of physical chemistry, 16, 516
TRIBE, A. See Gladstone, J. H.
TRIMBLE, H., and J. C. Peacock. Preparation of oak tannins, with
special reference to the use of acetone as a solvent, 15, 344
TROOST, L. Distillation of a heterogeneous liquid (abst.), 1, 401: New
compounds of nitric acid and acetic acid with ammonia (abst.),
1

4, 234: Molecular weight of phosphorus iodides (abst.), 4, 272:
On the oxide of thorium (abst.), 7, 285
TROST, E. Salts of platinum (abst.), 8, 176: Action of zinc dust on
benzyl chloride (abst.), 8, 181
TROWBRIDGE, P. F. Periodides of pyridine, 19, 322
TROWBRIDGE, P. F., and O. C. Diehl. Halides and perhalides of pyri-
dine, 19,558
TROWBRIDGE, P. F. See also Prescott, A. B.
TRUBEK, M. Estimation of extraction in sugar houses, 17, 920
TSCHAPLOWITZ, F. Apparatus for estimation of fats (abst.), 1, 586:
New form of volumenometer (abst.), 1,586
TSCHELTZOFF. Determination of nitrogen in explosives (abst.), - 1, 542
TSCHERNIAC, J., and R. Hellon. Sulphocyanacetone (abst.), - 5, 122
TSCHERNIAC, J., and R. Hellon. Sulphocyanacetone (abst.), - 5, 122 TSCHERNIAC, J., and C. H. Norton. Sulphocyanpropimine (abst.), 5, 122
TSCHERNIAC, J. See also Grimaux, E., and Norton, T. H.
TSCHIJEWSKY, P. Volatilization of salts on evaporation of solutions
(abst.), 6, 157
TSCHIRCH, A. Preparation of pure chlorophyll (abst.), - 6, 89
TSCHIRIKOFF, A. Analysis of coal (abst.), 6, 128
TUCKER, J. H. Solvent action of carbonic anhydride in solution, 3, 26
TURNER, F. See Frankland, P. F.
TURNER, T. Eutexia (abst.), 7, 113: Influence of silicon on the prop-
erties of iron and steel (abst.), 10, 159
TWITCHELL, E. Separation of solid and liquid fatty acids, - 17, 189
TYPKE, P. G. W. Nitro-derivatives of resorcinol (abst.), - 5, 129
ULBRICHT, R. Reducing effect of different kinds of sugar on alkaline
copper solution (abst.), 1,342
ULEX, G. Foreign seeds in rape-seed cake (abst.), 4, 193
UNGER, B. Analysis of vulcanized rubber, etc. (abst.), - 7, 178
URECH, F. Action of potassium carbonate on isobutylaldehyde
(abst.), 1, 292: On Lilienfein's lamp, for low boiling petroleum
(abst.), <b>6</b> , 106: See also Hell, C.
VALEUR, F. See La Coste, W.
VANDERPOEL, F. Dropping flask for standard solutions, - 16, 156
VANGEL, B. Action of dehydrating substances on acids (abst.), - 2, 369
VAN HASSELT, A. Determination of sodium compounds in potassium
carbonate (abst.), 4, 165
VAN INGEN, D. A. See Stone, G. C.
VAN SLYKE, L. L. Composition of cow's milk, 15, 645: Composition
of American cheddar cheese, 15, 605: Determination of casein in
cow's milk, 15, 635: Determination of albumen in cow's milk, 16, 712
VARENNE, E. Researches on the coagulation of egg albumin (abst.),
8, 73: See also Prunier, L.
VEITCH, F. P. Modifications of the Pemberton method for determin-
ing phosphoric acid, 18, 389
VELEY, V. H. Higher oxides of manganese and their hydrates
(abst.), 4, 168: Rate of decomposition of ammonium nitrate (abst.), 5, 235

VENABLE, F. P. Heptylene from heptane of Pinus sabiniana, 4, 22:
Action of alcoholic potash on heptylene bromide, 4, 254: Heptyl-
malonic and heptylacetic acids, 5, 10: Zinc in drinking water,
6, 214: Analysis of the leaves of Ilex cassine, 7, 100: An exami-
nation of the chlorides of zirconium, 16, 469: Modified arrange-
ment of the elements under the natural law, 17, 75: Chlorides
of zirconium, 17, 842: Early arrangement of the elements, 17,
947: Revision of the atomic weight of zirconium, 20, 119: Modi-
fied air-bath, 20, 271
VENABLE, F. P., and C. Baskerville. Zirconium sulphite, 17, 448:
Oxalates of zirconium, 19, 12: Oxyhalides of zirconium, - 20, 321
VENABLE, F. P., and A. W. Belden. Properties of zirconium dioxide,
20, 273; Note on liquid phosphorus, 20, 303
VENABLE, F. P., and T. Clarke. Properties of calcium carbide, 17,
306: Study of the zirconates, 18, 434
VENABLE, F. P., and F. W. Miller. Nature of the change from violet
to green in solutions of chromium salts, 20, 484
VERNEUIL, A. Action of iodine on potassium selenocyanate (abst.),
6, 34: Action of non-metals on selenocyanates (abst.), 8, 179:
Preparation of a calcium sulphide with violet phosphorescence
(abst.), 8, 199
VERNEUIL, A., and L. Bourgeois. Artificial production of crystallized
ferric arsenate (abst.), 2, 132
VERSON, E. Botrytis bassiana and its crystalline products, - 16, 860
VIEILLE, P. See Berthelot, M., and Sarrau, E.
VIETH, P. Average composition of milk (abst.), 8, 28: Presence of
matter soluble in ether in filter-paper (abst.), 8, 279: Average
composition of milk (abst.), 10, 47, 190
Vignal, H. Determination of chromium (abst.), 8, 77
Vignon, L. Action of water on stannic chloride (abst.), 12, 71:
Technical analysis of water (abst.), 12, 73: See also Barbier, P.
VIGNON, P. Separation of iron and aluminum (abst.), 7, 124
VILLE, J. Crystallized zinc hydroxide (abst.), 7, 285
VILLEJEAN. See Dalché.
VILLIERS, A. Oxalic acid (abst.), 2, 430: On tetranitroethylene bro-
mide (abst.), 6, 131: On nitrated derivatives of ethylene hydride
(abst.), 6, 131; Formation of ptomaines in cholera (abst.), 7, 80:
On pathological urine (abst.), 7, 288: Detection of sulphites in
the presence of thiosulphates and sulphates (abst.), 9, 117: A new
oxacid of sulphur (abst.), 10, 76
VINCENT, C. Nitriles in pyrogenous products from beet root residues
(abst.), 1, 277: Reactions of dimethylamine with metallic solu-
tions (abst.), 2, 133: Three new compounds of rhodium (abst.),
7, 283: Reactions of the aqueous solution of dipropylamine with
metallic salts (abst.), 8, 201
VINCENT, C., and J. Chappuis. Action of alcoholic chlorides on
ammonia and on methylamines (abst.), 8, 95

VINCENT, C., and B. Delachanal. Density and coefficient of expansion of methyl chloride (abst.), 1, 271: Properties of mixtures of methyl cyanide with methyl and ethyl alcohols (abst.), 2, 430:
Tannic acid contained in the berries of the sorbus tree (abst.), 9, 101
VÖLTZKOW, M. See Liebermann, C.
VOGEL, H. W. Influence of light on chemical processes (abst.), 1, 93: Investigations on adulterations of wine (abst.), 1, 578: New lines in the spectrum of hydrogen, and the dissociation of calcium
(abst.), 2, 226
VOGEL, J. H. Thomas slags (abst.), 9, 118: Determination of phosphoric acid in Thomas slags (abst.), 9, 119
phoric acid in Thomas slags (abst.), 9, 119 Volckening, G. J. Mechanical arrangement of fat extraction appa-
ratus, 19, 735
Volhard, J. Silver titration with ammonium thiocyanate for deter-
· mination of halogens, copper, and mercury (abst.), - 1, 323
Volhard, J., and H. Erdmann. Synthetical production of thiophen
(abst.), 7, 230
VOLNEY, C. W. On the decomposition of phosphates by sodium acid
sulphate, 7, 238; 8, 32: On the decomposition of sodium nitrate
and the distillation of nitric acid, 13, 246: Composition of baryto-
celestite, 13, 290: American lithographic stones, 14, 376: Apparatus for fractional distillation, 16, 160
Voorhees, C. L. See Osborne, T. B.
VORTMANN, G. Identification and determination of chlorine in pres-
ence of bromine and iodine (abst.), 2, 368: See also Lippmann,
E., Messinger, J., and Skraup, Z. H.
VRAU, G. See Bleunard, A.
VRIJ, J. E. de. Determination of alkaloids in cinchona bark (abst.),
4, 193: Detection of cinchonidine in quinine sulphate (abst.), 8, 233
VULPIUS, G. Thallin compounds (abst.), 7, 84: Almond oil testing
(abst.), ' 8,87
WAAGE, P. Studies on the ebullioscope (abst.), 1, 572: See also Guldberg, C. M.
WADMAN, W. E. Cream of tartar substitutes: their chemistry and
analysis, 16, 333
WAGNER, A. Automatic regulator for evaporation, etc. (abst.), 1, 584:
Test for adulteration in butter (abst.), 8, 40
WAINWRIGHT, J. H. Estimation of morphine in opium, 7, 45: The
examination of commercial glycerol, 11, 125: The Chapman wash-
ing-bottle, 13, 126: Determination of solid fat in artificial mixtures,
etc., 18, 259: Volumetric determination of lead, 19, 389
WAIT, C. E. Analysis of bindheimite, 1, 134: An earthy ferric sul-
phate from Arkansas, 4, 61: Convenient still for the laboratory, 17, 917: Oxidation of silver, 18, 254: The occurrence of titanium, 18, 402
WALDBOTT, S. On the volatility of borax, 16, 410: On the volatility
of sodium fluoride, 16, 418
WALKE, W. Determination of the strength of various high explosives 12, 256

WALKER, J. See Carnelley, T.
WALKER, J. F. Ethers of nitrosophenol (abst.), - 7, 87
WALKER, P. H. Use of organic bases in preparation of calcium and
barium ferrocyanides, 17, 927 : Applications of hydrogen peroxide
to quantitative analysis, 20, 513
WALLACE, D. L., and E. F. Smith. Electrolytic determination of
cadmium, 19, 870
WALLACE, D. L. See also Smith, E. F.
WALLACH, O. Azo dye-stuffs (abst.), 4, 173: Formation of basic
compounds from amides (abst.), 4, 206: Oxalines and glyoxalines
(abst.), 5, 19: Chemistry of the terpenes and essential oils (abst.),
7, 121, 246
WALLACH, O., and O. Bischof. Decomposition of dichloracrylic acid
by alkalies (abst.), 1, 163
WALLACH, O., and W. Brass. Oleum cynae. Contribution to knowl-
edge of the terpenes (abst.), 7, 122
WALLACH, O., and A. Kölliker. Action of hydrochloric acid upon
amidoazo-compounds (abst.), 7, 86
WALLER, E. Water supply of the city of New York, 4, 15: Examina-
tion of methods of determining phosphorus in iron ores, 4, 88 : Re-
view of papers on analytical chemistry, 4, 160: Review of papers on analytical chemistry (proximate,) 4, 188: Precipitation of
barium sulphate, 4, 212: Peculiar reaction with lead acetate,
4, 213: On the examination of snow water, 6, 187: Sanitary ex-
aminations of some waters, 8, 147: Examination of butter fat and
its substitutes, 8, 155: Notes on the analysis of zinc ores, 11, 49:
Note on the purification of alcohol, 11, 124: Determination of
lithia in mineral waters, 12, 214: Experiments in milk analysis,
13, 52: Note on the action of waters on lead pipe, 13, 176: Labora-
tory devices, 16, 869: See also Chandler, C. F.
WALTER, J. Hand regulator for projection of spectra by electric light
(abst.), 7, 141
WALTZ, G. Propyl- and isopropylsuccinic acids (abst.), - 4, 270
WALZ, I. Occurrence of vanadium in American magnetites, P. 1, 58:
Regularities of color and color-changes, P. 1, 128
WANKLYN, J. A. Gas making by Cooper's lime process, with a
method of gas analysis (abst.), 6, 31: On milk analysis (abst.), 8, 43
WANKLYN, J. A., and W. C. Cooper. Organic analysis in the wet
way (abst.), 1,542
WANKLYN, J. A. See also Fox, W
WARDER, R. B. Determination of caustic alkali in presence of
carbonate (abst.), 4, 165: Speed of dissociation of brass (abst.),
6, 75: Problems of physical chemistry, 14, 360: Cross-fertilization
of the sciences, 15, 601
WARINGTON, R. Determination of nitric acid as nitric oxide (abst.),
1, 540: Determination of nitric acid by means of indigo (abst.),
1, 541: Determination of nitric acid as nitric oxide (abst.), 4, 258:

Determination of nitric acid in soils (abst.), 4, 258: Nitrification (abst.), 7, 23: On tests for nitrous and nitric acids (abst.), 7, 61:
Behavior of nitrates in Kjedahl's process (abst.), 7, 290: Chemical
actions of some micro-organisms (abst.), 10, 84: See also Gros-
jean, B. J., and Lawes, J. B.
WARNECKE, G. See Atwater, W. O.
WARREN, H. N. Apparatus for preparing sulphurous, carbonic, and
phosphoric anhydrides (abst.), 9, 175: Pressure tubes (abst.), 10,
69: Electrolytic method of liquefying gases (abst.), 10,
WARREN, T. T. P. B. Water supply to steam boilers (abst.), 10, 172:
Sensibility of earth-nut oil to heat when electrified (abst.), 10, 17
WARTH, C. See Kelbe, W.
Wason, R. S. See Noyes, A. A.
WATKINS, W. H. See Noyes A. A.
WATSON, W. H. Detection of milk adulteration (abst.), - 1, 5%
WATTS, F. Determination of carbon and silicon in iron, steel, etc.
WATTS, J. I. See Thorpe, T. E.
Wayss, A. See Gasiorowski, K.
WEBER, A., and R. Heim. Preparation of aromatic ethereal salts of
phosphoric acid (abst.), 5, 1
Weber, A., and N. Wolff. Perchlorophenol from perchlorobenzene
(abst.), 7, 22
Weber, A. See also Ris, C.
Weber, H. A. Note on Aragonite, 1, 79: Notes on certain reactions
for tyrotoxicon, 12, 485: Occurrence of tin in canned food, 13,
200: Raphides, cause of acridity in certain plants, 13, 215: Be-
havior of antiseptics toward salivary digestion, 14, 4: Behavior of
coal-tar colors towards the process of digestion, 18, 1092: Root
tubercles in water culture, 20,
WEBER, H. A., and W. McPherson. Determination of cane sugar in
the presence of commercial glucose, 17, 312: Action of acetic and
hydrochloric acids on sucrose 17, 32
WEBSTER, C. S. Analysis of certain plant fibres (abst.), 5, 92:
Chlorination of pyrogallol (abst.), 6, 23
WEDDIGE, A. Derivatives of o-amidobenzamide (abst.), - 7, 14
WEDDIGE, A., and M. KÖRNER. A polymeric dichloracetonitrile
· //
WEGER, F. See Ritthausen, H.
WEIDEL, H., and G. L. Ciamician. Substances from tar produced by
destructive distillation of animal substances (abst.), - 2, 9
Weigelt-Rufach, C. Determination of extract in wine (abst.), - 7, 6
Weigert, L. Determination of acetic acid in wine (abst.) - 1, 36
Well, F. Volumetric determination of zinc powder (abst.), - 9, 3
Weinberg, A. Oxydiphenyl bases (abst.), 10, 1
WEINHOLD, A. Apparatus for distillation of mercury (abst.), - 1, 37

WEISKE, H. Estimation of nitrogen in milk and urine of herbivora
(abst.), 8, 279
WEISKE, H., B. Schulze, and E. Flechsig. Digestibility of cotton-
seed cake and meal (abst.), 8, 60
WEITH, W. Constitution and synthesis of carbotriphenyltriamine
(abst.), r, 166: See also Merz, V.
WELLER, A. Detection and estimation of titanium (abst.), - 5, 54
WELLS, H. L., and W. L. Mitchell. Volumetric determination of
titanic acid and iron in ores 17, 878
Wells, J. S. Estimation of phosphoric acid in fertilizers (abst.), 7, 210
Welsh, W. See Pechmann, H. von.
WELTNER, A. Action of chlor- and bromacetone, etc., on ethyl
acetoacetate (abst.), 6, 85
Wender, N. Viscosimetric examination of butter for foreign
fats, 17, 719
WERIGO, B., and P. G. Melikoff. Formation of monochlorlactic acid
and dichlorpropionic acid from glyceric acid (abst.), - 1, 289
WERNER, A. See Hantzsch, A.
WERNER, E. Substitution of bromine for phenolic hydrogen (abst.),
7, 145: See also Berthelot, M.
Weselsky, P., and R. Benedikt. Some azo-compounds (abst.),
r, 394: Azophenols (abst.), 2, 65
WESSON, D. Examination of lard for impurities, 17, 723 WESTESSON, J. Determination of nickel in steel, 16, 110
Westesson, J. Determination of nickel in steel, 16, 110
WETHERED, E. Composition of Pennant grits, etc. (abst.), - 4, 144
WEYL, T., and C. Bischoff. On gluten (abst.), 2, 370
Weyl, T. See also Frenzel, J.
WHEELER, H. A., and C. Luedeking. Iodide coatings and sublimates
(abst.), 10, 26
WHEELER, H. J. See Winton, A. L.
WHITEHEAD, C. Estimation of tellurium in copper bullion, 17, 280:
Tellurium: separation from copper residues, etc., - 17, 849
WHITELAW, T. N. Action of sodium chloride on solutions of soaps
(abst.), 8, 104
WHITFIELD, J. E. See Blair, A. A., and Gooch, F. A.
WHITNEY, W. R. See Noyes, A. A.
WICKHORST, M. H. 'Manufacture of phosphor bronze, 19, 393: Anal-
ysis of alloys containing phosphorus, 19, 396 Widmann, O. Synthesis of thymol from cuminol (abst.), - 4, 205
WIDMANN, O. Synthesis of thymol from cuminol (abst.), - 4, 205
WIEDEMANN, G. H. Relations between physical constants of chemi-
cal compounds (abst.), 4, 264
WIGAND, P. See Tollens, B.
WIGNER, G. W. Koettstorfer's method for testing butter (abst.), 1, 568
WILBER, F. A. See Austen, P. T.
WILDERMAN, M. Boiling-points of bodies, a function of their chemi-
cal nature (abst.), 12, 234
WILDT, E., and A. Scheibe. Estimation of nitric acid (abst.), - 6, 240

WILEY, H. W. Rotary power of commercial glucose and grape sugar,
2, 387: Effect of heating with dilute acids and treating with ani-
mal charcoal, on the rotary power of glucose, etc., 2, 395: Com-
position of maple sugar and syrup (abst.), 7, 92: Analysis of
seed of Calycanthus glaucus (abst.), 12, 15: Influence of food
and animal idiosyncrasy on composition of butter (abst.), 12, 16:
Pine tree sugar, 13, 228: Honey from the aphis, or plant louse,
14, 350: Announcement of the joint committee on the World's
Fair Chemical Congress, 15, 43: World's Congress Auxiliary of
the World's Columbian Exposition, 15, 106: Lamp for constant
monochromatic flame, 15, 121: Improved extraction apparatus,
15, 123: Address of Welcome to the World's Chemical Congress,
15, 301: The waste and conservation of plant food (presidential
address), 16, 1: Notice of meeting of Official Agricultural Chem-
ists, 16, 431: Assimilation of free nitrogen, a correction, 16, 432:
The Chemical Midwinter Fair Congress at San Francisco, 16, 645:
The synthetic food of the future (presidential address), 17, 155:
Recent advances in milk investigations, 18, (73): Use of acetylene gas as an illuminant for polariscopic work, 18, 179, (37): Estima-
tion of levulose in honey, 18, 81, 189: Determination of the heat
of bromination of oils, 18, 378, (58): Second International Con-
gress of Applied Chemistry, 18, 923: Modified form of ebullioscope,
18, 1063: Mechanical analysis of basic phosphatic slags, 19, 19:
Recovery of waste platinum chloride, 19, 258: Determination of
potash and phosphoric acid in fodders, 19, 320: Influence of
vegetable mold on nitrogenous content of oats, 19, 605
WILEY, H. W., and W. D. Bigelow. Determination of the hydro-
thermal value of a bomb calorimeter, 19, 439: Heat of combus-
tion of cereals and cereal products, 20, 304
WILEY, H. W., and E. E. Ewell. Determination of lactose in milks,
18, 428: A correction, 18, 1111
WILEY, H. W., and W. H. Krug. Standard methods for the esti-
mation of starch, 20, 253
WILEY, H. W. See also Ewell, E. E., Krug, W. H., and Runyan,
E. G
WILFARTH, H. Determination of nitric acid (abst.), 10, 192
WILKES, J. F. Decomposition of potassium cyanide, 6, 222
WILL, H. Volumetric determination of boric acid (abst.), - 10, 43
WILL, W. Bodies produced by action of alcoholic iodides on sul-
phocarbanilide (abst.), 4, 230
WILL, W., and I. Pinnow. Analysis of a meteorite of Carcote,
Chili (abst.), 12, 155 WILLGERODT, C. Picrylsulphonic acid and sodium picrylsulpho-
WILLIAMS, C. B. Estimation of phosphoric acid in soils, etc., WILLIAMS, C. P. Analysis of mine water from the lead region of Missouri, P. 1, 179

WILLIAMS, G. Substitute for litmus (abst.), I, 110: Occlusion of
hydrogen by zinc dust, etc. (abst.), 7, 113: Source of the hydro-
gen occluded by zinc (abst.), 7, 286
WILLIAMS, J. See Harrison, J. B.
WILLIAMS, R. Adulteration of tallow with cotton-seed oil (abst.),
10, 86: Examination of gums and resins (abst.), 10, 157: Citric
acid in lemon juice (abst.), 10, 195
WILLIAMS, R. P. Electrolytic process for manufacture of white
lead, 17, 835
WILLIAMS, S. W. The nomenclature and notation of alkaloidal
salts, 11, 130
WILLM, E. Mineral waters of the Auvergne (abst.), 1, 271: Anal-
ysis of waters of the Bourboule (abst.), 2, 365: Mineral waters
containing iron and nitrates (abst.), 2, 431: Manufacture of
cyanides and ferrocyanides by the aid of trimethylamine (abst.), 6, 199
WILLS, E. J., and K. L. Barr. Precipitations of alums by sodium
carbonate (abst.), 4, 258
WILM, V. von. Determination of fat in palm nut meal (abst.), 8, 28
WILSON, L. F. Butter analysis (abst.), II, 54
WINGARD, C. von. Examination of humite minerals (abst.), - 7, 226
WINKLER, C. Generation of hydrogen sulphide (abst.), 10, 65: Re-
duction of oxygen compounds by magnesium (abst.), - 12, 152
WINSSINGER, C. See Spring, W.
WINTHER, A. See Neville, R. H. C.
WINTON, A. L. Conditions affecting the accuracy of the determina-
tion of potaslı as potassium platinichloride, 17, 453: Modified
ammonium molybdate solution, 18, 445 WINTON, A. L., and H. J. WHEELER. The Lindo-Gladding method
of determining potash, 20, 597
WISLICENUS, W. Action of potassium cyanide on phthalide (abst.), 7, 204
WITT, O. N. Azo-derivatives of diphenylamine and diphenylmitros-
amine (abst.), 1, 396: Contributions on the indulines (abst.), 6,
81: On indophenols, 6, 82: Nitroso-derivatives of aromatic di-
amines (abst.), 8, 55: Progress in manufacture and use of artificial
coloring matters 15, 456
WITT, O. N., and E. G. P. Thomas. Researches on the induline
group (abst.), 5, 96
WITT, O. N. See also Nölting, E.
WITT, O. N. See also Nölting, E. WITTENBERG, M., and V. Meyer. On benzil (abst.) 5, 126
WITTENBERG, M., and V. Meyer. On benzil (abst.), - 5, 126
WITTENBERG, M., and V. Meyer. On benzil (abst.), 5, 126 WITZ, G., and F. Osmond. Extraction of vanadium from basic slags
WITTENBERG, M., and V. Meyer. On benzil (abst.), - 5, 126
WITTENBERG, M., and V. Meyer. On benzil (abst.), 5, 126 WITZ, G., and F. Osmond. Extraction of vanadium from basic slags of Creusot (abst.), 4, 241: Oxycellulose for determination of
WITTENBERG, M., and V. Meyer. On benzil (abst.), 5, 126 WITZ, G., and F. Osmond. Extraction of vanadium from basic slags of Creusot (abst.), 4, 241: Oxycellulose for determination of vanadium (abst.), 8, 78
WITTENBERG, M., and V. Meyer. On benzil (abst.), 5, 126 WITZ, G., and F. Osmond. Extraction of vanadium from basic slags of Creusot (abst.), 4, 241: Oxycellulose for determination of vanadium (abst.), 8, 78 WOLCKENHAAR. Determination of the specific gravity of butter and
WITTENBERG, M., and V. Meyer. On benzil (abst.), 5, 126 WITZ, G., and F. Osmond. Extraction of vanadium from basic slags of Creusot (abst.), 4, 241: Oxycellulose for determination of vanadium (abst.), 8, 78 WOLCKENHAAR. Determination of the specific gravity of butter and tallow at 100° (abst.), 8, 205

Wolff, C. H. Methods of quantitative spectral analysis (abst.), I,
84: Spectroscopic reactions of ergot (abst.), 1, 103: Quantitative
spectroscopic examination of pure indigo (abst.), - 6, 97
Wolff, N. Precipitation of manganese by air loaded with bromine
vapor (abst.), 5, 244 : See also Weber, A.
Wolfram, G. Determination of theobromine in cocoa and chocolate
(abst.), 1, 365
Woll, F. W. Recent progress in analysis of cattle foods - 16, 174
Wollny, R. Analytical operations and apparatus (abst.), - 7, 92, 180
Wood, E. F. Modification of molybdate method of estimating phos-
phorus in steel (abst.), 7, 294: Determination of phosphorus in
iron and steel (abst.), 9, 8
Wood, J., and J. L. Borden. Action of ammonium hydrate on halogen
salts of lead 6, 218
WOODCOCK, R. C. Detection of alkaloids in food, etc. (abst.), - 4, 193
WOODMAN, A. G. Method for the differentiation of organic matter in
water, 20, 497: See also Talbot, H. P.
WOODMAN, D. Note on lead poisoning by carbonated beverages, 11,
99; Necessity for inspection of wells in cities and towns, 13, 44:
Three samples of crude petroleum, 13, 179: An apparatus for
heating sealed tubes, 13, 182: Analyses of glass used in the
manufacture of incandescent electric lamps, 14, 61: Note on deni-
tration of pyroxylin, 14, 112: Variations in the composition of
red lead 19, 339
red lead 19, 339 WOODRUFF, E. C. Color reactions of nitric and chloric acids with
red lead 19, 339 WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156
red lead 19, 339 WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156 WOODWORTH, E. H. See Noyes, A. A.
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hy-
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel (abst.), 6, 26: Influence of temperature of distillation on the com-
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel (abst.), 6, 26: Influence of temperature of distillation on the composition of coal gas (abst.), 6, 105: Illuminating power of methane
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel (abst.), 6, 26: Influence of temperature of distillation on the composition of coal gas (abst.), 6, 105: Illuminating power of methane (abst.), 7, 213: Coal distillation (abst.),
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel (abst.), 6, 26: Influence of temperature of distillation on the composition of coal gas (abst.), 6, 105: Illuminating power of methane (abst.), 7, 213: Coal distillation (abst.), 10, 45  WROBLEWSKY, E. Structural formulae of aromatic compounds
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel (abst.), 6, 26: Influence of temperature of distillation on the composition of coal gas (abst.), 6, 105: Illuminating power of methane (abst.), 7, 213: Coal distillation (abst.), 10, 45  WROBLEWSKY, E. Structural formulae of aromatic compounds (abst.),
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel (abst.), 6, 26: Influence of temperature of distillation on the composition of coal gas (abst.), 6, 105: Illuminating power of methane (abst.), 7, 213: Coal distillation (abst.), 10, 45  WROBLEWSKY, E. Structural formulae of aromatic compounds (abst.), 1, 169  WROBLEWSKI, S. VON. Composition of hydrated carbonic acid(abst.),
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel (abst.), 6, 26: Influence of temperature of distillation on the composition of coal gas (abst.), 6, 105: Illuminating power of methane (abst.), 7, 213: Coal distillation (abst.), 10, 45  WROBLEWSKY, E. Structural formulae of aromatic compounds (abst.), 1, 169  WROBLEWSKI, S. VON. Composition of hydrated carbonic acid(abst.), 4, 236: Liquefaction of hydrogen (abst.), 6, 157: Use of boiling
red lead 19, 339  WOODRUFF, E. C. Color reactions of nitric and chloric acids with certain aromatic bodies, 19, 156  WOODWORTH, E. H. See Noyes, A. A.  WORINGER, L. Camphanic acid (abst.), 7, 82  WORMLEY, T. G. Determination of urea in urine (abst.), 4, 196  WRIGHT, C. R. A. On the manufacture of cuprammonium and zinc ammonium compounds, etc. (abst.), 6, 139  WRIGHT, C. R. A., and A. E. Menke. Manganese dioxide (abst.), 2, 344  WRIGHT, C. R. A., and C. Thompson. Estimation of resin in soaps (abst.), 8, 62  WRIGHT, H. E. See Stone, W. E.  WRIGHT, L. T. On hydrated ferric oxide, and its behavior with hydrogen sulphide (abst.), 5, 99: Estimation of hydrogen sulphide and carbon dioxide in coal gas (abst.), 5, 112: On gaseous fuel (abst.), 6, 26: Influence of temperature of distillation on the composition of coal gas (abst.), 6, 105: Illuminating power of methane (abst.), 7, 213: Coal distillation (abst.), 10, 45  WROBLEWSKY, E. Structural formulae of aromatic compounds (abst.), 1, 169  WROBLEWSKI, S. VON. Composition of hydrated carbonic acid(abst.),

WURSTER, C. Oxidations by means of hydrogen dioxide (abst.),
9, 192: See also Fittig, R.
WURTZ, A. Chloral hydrate (abst.), 1, 401: Answer to remarks of
Berthelot on chloral hydrate (abst.), 1, 403: Action of ethylene
chlorhydrin on pyridine bases and on quinoline (abst.), 4, 272:
Observations on Faraday's law, and on the law discovered by
Bouty (abst.), 6, 126: Note on Faraday's law (abst.), - 6, 156
Wynkoop, G. Sodium nitrite as a precipitant of the iron group in
qualitative analysis, 19, 434
WYROUBOFF, G. On Marcano's platinum sulphocyanate (abst.),
2, 430: On the racemates of sodium and potassium (abst.), 8, 37:
An acid cerium sulphate (abst.), 12, 70
YARDLEY, H. B. Note on Warington's modification of Kjeldahl's pro-
cess (abst.), 7, 291
YOCUM, J. H. See Alsop, W. K.
Yoshida, H. See Atkinson, R. W.
Young, A. V. E. Apparatus for gas analysis (abst.), - 1, 283, 373
Young, S. α-ethylvalerolactone, α-ethyl-β-methylvalerolactone, and
a decomposition of $\beta$ -ethylacetosuccinic ester (abst.), 5, 100: Test
for gallic acid (abst.), 5, 245 : See also Ramsay, W.
Young, S. W. Titration of stannous salts with iodine, 19, 809: Solu-
bility of stannous iodide in water and in solutions of hydriodic
acid, 19, 845: On iodostannous acid, 19, 851
Young, S. W., and M. Adams. Action of iodine on solutions of
stannous chloride 19, 515
Young, S. W., and R. E. Swain. Volumetric determination of the
nitro group in organic compounds, 19, 812
Young, W. C. Detection of alum in flour by the logwood test
(abst.), 1, 566: Alumina as a natural constituent of wheat flour
(abst.), 9, 169
Yvon, P. Detection of fuchsine in wine (abst.), - 1, 575
ZABUDSKY, G. Determination of carbon in cast iron (abst.), - 6, 193
ZECCHIM, [M.] Distinction of clare and cotton-seed oils (abst.), 4, 192
ZECKENDORF, A. See Hantzsch, A.
ZEIDLER, O., and F. Zeidler. Action of oxidizing agents on the hydrocarbons of the olefine series (abst.), 2, 185
ZENGER, V. See Brühl, J. W.
ZENTHER, A. Action of carbon monoxide on alkaline hydroxides at
high temperatures (abst.), 2, 367
ZERENER, H. Microscopic examination of potable water (abst.), 1, 578
ZIMMERMANN, A. Liquid carbonic acid under regulated pressure
(abst.), 6, 25
ZIMMERMANN, C. Properties and atomic weight of uranium (abst.), 5, 25
ZIMMERMANN, J. Action of ethyl chloracetate on phenylenediamine
(abst.), 4, 267
ZIMMERMANN, J., and M. Knyrim. Action of ethyl chloracetate on
primary diamines (abst.), 5, 128

ZIMMERMAN	N, Y.,	and	A.	Müller.	. 1	-Nitrober	ızyli	dene	chlor	ide	
(abst.),	-	-		-	-	-	-			8,	75
ZINCKE, T.	Action	of am	ines	on quir	one	s (abst.),		-	- 4	, 226,	264
ZINCKE, T.,	and O	. Keg	gel.	Action	of	chlorine	on	phlor	ogluc	ine	
(abst.),	-	-		-	-		-	-		12,	159
ZÜBLIN, H.	See Me	eyer,	V.								

## INDEX OF NEW BOOKS.

ADAMS, C. F. Physical Laboratory Manual for Secondary Schools, 19, 354
ADRIANCE, J. S. Laboratory Calculations and Specific Gravity Tables, 19, 355
ALLEN, A. H. Commercial Organic Analysis. Vol. III, Part III.
Vegetable Alkaloids (concluded), 19, 263
ALLEN, J. A. Tables for Iron Analysis, 19, 177
ALPERS, W. C. The Pharmacist at Work, 20, 144
ANDÉS, L. E. Animal Fats and Oils, 20, 550
Austen, P. T. Notes for Chemical Students, 19, 438
BANCROFT, W. D. The Phase Rule, 19, 767
ВÉНАІ, А. Traité de Chimie Organique d'après les Théories Mo-
dernes. Vol. I, Aliphatic Compounds, 19, 437: Vol. II, Carbo-
cyclic Compounds, 19, 680
BENNETT, A. A. A Text-Book of Inorganic Chemistry, - 17, 243
BERNTHSEN, A. A Text-Book of Organic Chemistry, 17, 500
BERTHELOT, M. Essai de Mécanique Chimique Fondée sur la Ther-
mochimie, 2, 161
BISCHOFF, C. A. Handbuch der Stereochemie, 17, 497
BLOUNT, B., and A. G. Bloxam. Chemistry for Engineers and Manu-
facturers. Vol. I, Chemistry of Engineering, Building, and Met-
allurgy, 18, 745: Chemistry for Engineers and Manufacturers.
Vol. II, Chemistry of Manufacturing Processes, 19, 171
Bolton, H. C. A Select Bibliography of Chemistry, 1492–1892, - 15, 713
Borchers, W. Electric Smelting and Refining, - 20, 156
BRUSH, G. J., and S. L. Penfield. Manual of Determinative Mineral-
ogy, with an Introduction on Blowpipe Analysis, - 18, 1109
CAIRNS, F. A. A Manual of Quantitative Chemical Analysis for the
Use of Students, 19, 271
CALDWELL, G. C. Elements of Qualitative and Quantitative Chem-
ical Analysis, 17, 419
CARNOT, A. Traité d'Analyse des Substances Minérales, - 20, 891
CAVENDISH, HON. HENRY, F.R.S. Experiments on Air (Alembic Club
reprint), 15, 664
CLARKE, F. W. The Constants of Nature. Part V.—A Recalculation
of the Atomic Weights, 19, 177
CLASSEN, A. Quantitative Chemical Analysis by Electrolysis, - 16, 877
CLASSEN, A., and W. Löb. Quantitative Chemical Analysis by Elec-
COMEY, A. M. A Dictionary of Chemical Solubilities, 20, 145 CONGDON, E. A. A Brief Course in Qualitative Analysis, 20, 889
Convict V. Province Decode of Chemical Laws
CORNISH, V. Practical Proofs of Chemical Laws, 18, 99
CREMER, J. H., and G. A. Bicknell. A Chemical and Metallurgical
Handbook, 16, 790

CROOKES, W. Select Methods in Chemical Analysis, Chiefly Inor-
ganic. Third edition, 16, 789
CURTMAN, C. O. Lessons in Qualitative and Volumetric Chemical
Analysis, etc., 16, 873
CUSHMAN, A. S. The Post-Mortem Detection and Estimation of
Strychnine (Transactions, etc.), 16, 720
DALTON, JOHN, William Hyde Wollaston, M.D., Thomas Thomson,
M.D. Foundations of the Atomic Theory (Alembic Club Reprint) 15, 544
DAVY, HUMPHRY. The Decomposition of the Fixed Alkalies and Al-
kaline Earths (Alembic Club reprint), 16, 717: The Elementary
Nature of Chlorine (Alembic Club reprint), 17, 74 DAY, D. T. Mineral Resources of the United States (1893), - 16, 572
DAY, D. 1. Mineral Resources of the United States (1893), - 16, 572
EILOART, A. A Guide to Stereochemistry, 15, 480
EISSLER, M. A Handbook of Modern Explosives, 20, 161
ELLIOTT, A. H. A System of Instruction in Qualitative Chemical
Analysis, 16, 429
EVANS, P. W. An Introductory Course in Quantitative Analysis, 20, 238
FARADAY, MICHAEL. The Liquefaction of Gases (Alembic Club Rep't) 18, 1110
FINK, E. Précis d'Analyse Chimique, 19, 267
FLEISCHMANN, W. The Book of the Dairy, 20, 157
FLETCHER, E. L. Practical Instructions in Quantitative Assaying
with the Blowpipe, etc., 16, 571
FLUCKIGER, F. A. Reactions. A Selection of Organic Preparations
Important to Pharmacy, 15, 478
FRASER, P. Tables for the Determination of Minerals by Physical
FREER, P. C. Descriptive Inorganic General Chemistry, 17, 152: The
Elements of Chemistry, 18, 1110
Fresenius, C. R. Manual of Qualitative Chemical Analysis, - 20, 142
FUERTES, J. H. Water and Public Health, 20, 158
FURMAN, H. VAN F. A Manual of Practical Assaying, 16, 142
GIBBS, W. E. Lighting by Acetylene, 20, 895 GILL, A. H. A Short Handbook of Oil Analysis, - 20, 237
GRIFFIN, R. B., and A. D. Little. The Chemistry of Paper-Making, 16, 875
GROSSMANN, J. Die Schmiermittel. Methoden zu ihrer Untersuchung
und Werthbestimmung, 16, 69
HALLER, A. Traité Élémentaire de Chimie, 19, 356
HARRIS, E. P. A Manual of Qualitative Chemical Analysis, - 17, 994
HELM, G. The Principles of Mathematical Chemistry, 20, 154
Hoff, J. H. van't. Studies in Chemical Dynamics, 19, 268: The Ar-
rangement of Atoms in Space, 20, 386
Howe, J. L. Bibliography of the Platinum Group, 20, 387
Hurst, G. E. Soaps, 20, 989
JONES, H. C. The Freezing-Point, Boiling-Point, and Conductivity
Methods, 20, 317
Keiser, E. H. Laboratory Work in Chemistry, 17, 996
LADD, E. F. A Manual of Quantitative Chemical Analysis, - 20, 552
TANDALIER I Spectrum Analysis 20 282

LANDOLT, H. Das optische Drehungsvermögen organischer Substan-
zen und dessen praktische Anwendung, 20, 381
LEFFMANN, H., and W. Beam. Analysis of Milk and Milk Products, 15, 596
LOEW, O. The Energy of Living Protoplasm, 19, 349
Long, J. H. Laboratory Manual of Elementary Chemical Physiology
and Urine Analysis, 16, 874: An Elementary Course in Experi-
mental and Analytical Chemistry, 17, 744: A Text-Book of Ele-
mentary Analytical Chemistry 20, 803
mentary Analytical Chemistry, 20, 893 LÜPKE, R. Elements of Electrochemistry, 20, 142
MCNEAL, F. B. Eighth Annual Report of the Dairy and Food Com-
missioner of Ohio, 17, 333 MANDEL, J. A. Handbook for the Bio-Chemical Laboratory, - 19, 357
MASON, W. P. Water Supply (Considered Principally from a Sani-
tary Standpoint), 18, 562
MEDICUS, L. Introduction to Qualitative Analysis, - 19, 265
MENDELÉERE D. The Principles of Chemistry 20, 148
MENSCHUTKIN N Analytical Chemistry 18 100
MENDELÉEFF, D. The Principles of Chemistry, 20, 148  MENSCHUTKIN, N. Analytical Chemistry, 18, 190  MÖLLER, F. P. Cod-Liver Oil and Chemistry, 17, 584
Morgan, J. L. R. An Outline of the Theory of Solution and its Re-
sults, 20, 153
MORLEY, E. W. On the Densities of Oxygen and Hydrogen, and on
the Ratio of their Atomic Weights, 18, 192
Moses, A. J., and C. L. Parsons. Elements of Mineralogy, Crystal-
lography, and Blowpipe Analysis, 17, 745 Muir, M. M. P. The Alchemical Essence and the Chemical Element.
An Episode in the Quest of the Unchanging, 16, 575: Tables and
Directions for Qualitative Chemical Analysis, 18, 1110
MURRILL, P. I. Alkaloidal Estimation; A Bibliographical Index, 20, 890
NEWTH, G. S. A Text-Book of Inorganic Chemistry, - 17, 71
Noves, A. A. A Detailed Course of Qualitative Analysis, - 16, 503
Noves, A. A., and S. P. Mulliken. Laboratory Experiments on the
Class Reactions and Identification of Organic Substances, - 20, 319
NOYES, W. A. Organic Chemistry for the Laboratory, - 20, 240
OETTEL, F. Introduction to Electrochemical Experiments, 20, 317:
Practical Exercises in Electrochemistry, 20, 318
ORNDORFF, W. R. A Laboratory Manual Containing Directions for
a Course of Experiments in Organic Chemistry, 15, 418
OSTWALD, W. The Scientific Foundations of Analytical Chemistry, 18, 98
PALAZ, A. A Treatise on Industrial Photometry, with Special Appli-
cation to Electric Lighting, 17, 151
PARNICKE, A. Die Maschinellen Hilfsmittel der chemischen Tech-
nik, 17, 74
PASTEUR, LOUIS. Researches on the Molecular Asymmetry of Natu-
ral Organic Products (Alembic Club reprint), 20, 235
PHILLIPS, F. C. Researches upon the Phenomena of Oxidation and
Chemical Properties of Gases, 15, 292 POOLE, H. The Calorific Power of Fuels, 20, 388
Poole, H. The Calorific Power of Fuels, 20, 388

PRIESTLEY, JOSEPH, and Carl Wilhelm Scheele. The Discovery of
Oxygen (Alembic Club reprint), 16, 718
Pupin, M. I. Thermodynamics of Reversible Cycles in Gases and
Saturated Vapors, 16, 430
REDWOOD, I. I. A Practical Treatise on Mineral Oils and Their By-
Products, 20, 236
REY, JEAN. The Increase in Weight of Tin and Lead on Calcination
(Alembic Club reprint), 17, 585
RICHARDSON, G. M. Laboratory Manual and Principles of Chemis-
try for Beginners, 16, 879
RICKETTS, P. DE P. Notes on Assaying, 19, 356 ROSCOE, SIR H. E. John Dalton and the Rise of Modern Chemistry, 17, 658
ROSCOE, SIR H. E. John Dation and the Rise of Modern Chemistry, 17, 658
RUDDIMAN, E. A. Incompatibilities in Prescriptions, etc., - 20, 151 SADTLER, S. P. A Hand-Book of Industrial Organic Chemistry, 17, 914
SADTLER, S. P., and H. Trimble. A Text-Book of Chemistry Intended
for the Use of Pharmaceutical and Medical Students, 17, 656
SANFORD, P. G. Nitro-Explosives, 19, 178
SANGER, C. R. Experiments in General Chemistry and Qualitative
Analysis, 18, 747: Laboratory Experiments in General Chemistry, 18, 747
SCHEELE, CARL WILHELM, and others. The Early History of Chlo-
rine (Alembic Club reprint), 20, 152
SCHRAUR F. C. First Annual Report of the Commissioner of Agri-
SCHRAUB, F. C. First Annual Report of the Commissioner of Agri-
culture of New York, 17, 333
SEYMOUR, P. H. Bibliography of Aceto-Acetic Ester and Its Deriva-
tives, 17, 332
SHENSTONE, W. A. Justus von Liebig: His Life and Work, - 17, 833
SIMON, W. Manual of Chemistry, 17, 501
SMITH, E. F. Electro-Chemical Analysis, 16, 574
SNYDER, H. The Chemistry of Dairying, 19, 175 SPENCER, G. L. A Hand-Book for Chemists of Beet-sugar Houses and
,
STETTENHEIMER, L. Kräfte der chemischen Dynamik, 17, 336
STILLMAN, T. B. Engineering Chemistry: Quantitative Analysis, 19, 272
STORER, F. H., and W. B. Lindsay. An Elementary Manual of
Chemistry, 16, 644
TALBOT, H. P. Introductory Course of Quantitative Chemical Analy-
sis, 19, 355
TILDEN, W. A. Hints on the Teaching of Elementary Chemistry in
Schools and Science Classes, 18, 563
THOMPSON, E. P. Roentgen Rays and Phenomena of the Anode and
Cathode. Concluding Chapter by W. A. Anthony, - 19, 175
THORP, F. H. Inorganic Chemical Preparations, 19, 178
THORPE, T. E. Humphry Davy, Poet and Philosopher, 20, 160
THRELFALL, R. On Laboratory Arts, 20, 384
, , ,

THRESH, J. C. Water Analysis, Especially Designed for the Use of
Medical Officers of Health, 19, 180
TRIMBLE, H. The Tannins. A Monograph on the History, Prepara-
tion, Properties, Methods of Estimation, and Uses, etc., Vol. II, 16, 428
VENABLE, F. P. A Short History of Chemistry, 16, 876: The Devel-
opment of the Periodic Law, 19, 173
WALLER, A. D. Exercises in Practical Physiology: Part III.—Phys-
iology of the Nervous System, Electro-Physiology, - 20, 238
WEDDERBURN, A. J. A Compilation of the Pharmacy and Drug Laws
of the Several States and Territories, 17, 333: Report on the Ex-
tent and Character of Food and Drug Adulteration, - 17, 333
WELLS, H. L. A Laboratory Guide in Qualitative Chemical Analysis, 20, 728
Wells, J. S. C. A Short Course in Inorganic Qualitative Analysis for
Engineering Students, 20, 896
WHITELEY, R. L. Organic Chemistry, 18, 99
WIECHMANN, F. G. Lecture Notes on Theoretical Chemistry, 15, 119:
Lecture Notes on Theoretical Chemistry. Second Edition, - 19, 266
WILEY, H. W. Proceedings of the Eleventh Annual Convention of
the Association of Official Agricultural Chemists, 17, 330: Princi-
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol.
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Mod-
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Modern Chemistry, 17, 832
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Mod-
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Modern Chemistry, 17, 832 Agricultural Experiment Station of Nebraska, Seventh Annual Report (1893), 16, 573
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Modern Chemistry, 17, 832 Agricultural Experiment Station of Nebraska, Seventh Annual Report (1893), 16, 573 Georgetown College, Qualitative Chemical Analysis of Inorganic Sub-
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Modern Chemistry, 17, 832 Agricultural Experiment Station of Nebraska, Seventh Annual Report (1893), 16, 573 Georgetown College, Qualitative Chemical Analysis of Inorganic Substances as Practiced in 17, 245
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Modern Chemistry, 17, 832 Agricultural Experiment Station of Nebraska, Seventh Annual Report (1893), 16, 573 Georgetown College, Qualitative Chemical Analysis of Inorganic Substances as Practiced in 17, 245 Methods for the Analysis of Ores, Pig Iron, and Steel, 20, 389
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Modern Chemistry, 17, 832 Agricultural Experiment Station of Nebraska, Seventh Annual Report (1893), 16, 573 Georgetown College, Qualitative Chemical Analysis of Inorganic Substances as Practiced in 17, 245 Methods for the Analysis of Ores, Pig Iron, and Steel, - 20, 389 Pharmacopoeia of the United States of America (1890), 15, 418
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Modern Chemistry, 17, 832 Agricultural Experiment Station of Nebraska, Seventh Annual Report (1893), 16, 573 Georgetown College, Qualitative Chemical Analysis of Inorganic Substances as Practiced in 17, 245 Methods for the Analysis of Ores, Pig Iron, and Steel, - 20, 389 Pharmacopoeia of the United States of America (1890), 15, 418 Select Tables from the U. S. Pharmacopoeia (1890),
ples and Practice of Agricultural Analysis. Vol. I, 17, 912; Vol. II, 17, 995; Vol. III, 19, 269 WILLARD, J. T. An Introduction to the Organic Compounds of Every-Day Life, 16, 502 WILLIAMS, R. P. Elements of Chemistry, 20, 159 WILSON, E. B. The Chlorination Process, 20, 239 WISSER, J. P. Explosive Materials, 20, 813 WURTZ, C. A., W. H. Greene, and H. F. Keller. Elements of Modern Chemistry, 17, 832 Agricultural Experiment Station of Nebraska, Seventh Annual Report (1893), 16, 573 Georgetown College, Qualitative Chemical Analysis of Inorganic Substances as Practiced in 17, 245 Methods for the Analysis of Ores, Pig Iron, and Steel, - 20, 389 Pharmacopoeia of the United States of America (1890), 15, 418

## INDEX OF OBITUARIES.

ALSBERG, DR. MEINHARD,	-		-		-		-		-		19, 954
CASAMAJOR, PAUL,		-		-		-		-		-	9, 206
CHEVREUL, MICHEL EUGÈNE,	-		-		-		-		-		11, 71
COLBY, CHARLES EDWARDS, -		-		-		-		-		-	20, 139
COLLIER, PETER, PH.D., -	-		-		-		-		-		18, 748
Douglas, Silas H.,		-		-		-		-		-	12, 306
GOLDMARK, JOSEPH, -	-		-		-		-		-		4, 7
HAVEMEYER, THEODORE A., -		-		-		-		-		-	19, 588
Kekulé, Professor August,	-		-		-		-		-		18, 1107
Krüss, Gerhard,		-		-		-		-		-	17, 423
McClure, Professor Edgar,	-		-		-		-		-		19, 767
MACINTOSH, JAMES BUCKTON,		-		-		-		-		-	13, 153
MEYER, LOTHAR VON, -	-		-		-		-		-		17, 664
MEYER, VICTOR,		-		-		-		-		-	19, 918
Moore, Dr. Gideon E., -	-		-		-		-		-		17, 659
MOTAY, CYPRIEN M. TESSIÉ DU,		-		-		-		-		-	2, 305
Mott, Dr. Henry A., -	-		-		-		-		-		19, 90
NASON, HENRY BRADFORD,		-		-		-		-		-	17, 339
Norton, Professor Lewis Mills	s,		-		-		-		-	15,	54, 241
PASTEUR, a tribute to,		-		-		-		-		-	17, 1000
PÉLIGOT, EUGÈNE MELCHIOR,	-		-		-		-		-		12, 128
Powers, Professor Mark, -		-		-		-		-		-	17, 586
RUPP, WILLIAM,	~		-		-		-		-		13, 71
SCHULTZ, CARL H.,		-		-		-		-		-	19, 676
SMITH, JOHN LAWRENCE, -	-		-		-		-		-		5, 228
STAS, JEAN SERVAIS,		-		-				-		-	14, 173
WORMLEY, PROFESSOR THEODORE	G	EOR	GE	,	-		-		-		19, 275

## INDEX OF SUBJECTS.

Abbreviations of titles of chemical journals, 10, 152
Absorbent blocks, 17, 472
Absorption pipette for gas analysis, 18, 67
Accuracy, actual, of chemical analyses, 18, 808: of commercial silver
assay, 16, 505: of metallurgical analyses, probable limits of, - 18, 35
Acenaphthene, heat of solution of, 18, 151
Acetal, new method for making (abst.), 2, 432
Acetaldehyde, action of, on resorcinol (abst.), 9, 34
Acetamide, heat of solution of, in water and in alcohol, 18, 156
Acetamide, ethyl-, halogen derivatives of, P. 2, 115
Acetanilide, heat of solution of, 18, 152: identification of, 17, 933:
qualitative examination of, 18, 142
Acetanilide, p-amido-, and some new azo compounds (abst.), 7, 55:
brom-, synthesis of indigo from (abst.), 12, 163
Acetate, calcium, manufacture and analysis of, 4, 94: ethyl, prepara-
tion of (abst.), 2, 366: uranium, as a reagent for albuminoids
(abst.), 7,29I
Acetate, chlor-, amyl, (abst.), 8, 74: chlor-, butyl, and butyl dichlor-
(abst.), 8, 180: chlor-, ethyl, action of, on phenylenediamine
(abst.), 4, 267: chlor-, ethyl, action of, on primary diamines
(abst.), 5, 128: benzalaceto-, ethyl, action of, on phenylhydrazine
(abst.), 8, 55
Acet benzalacetic ester: see benzalacetoacetic ester.
Acetic acid, action of, on French oil of turpentine (abst.), 8, 71:
determination of, in crude calcium acetate (abst.), 1, 367, 582;
determination of, in vinegar, 17, 741, 834: determination of, in
wine (abst.), 1, 364: fluidity of anhydrous and diluted (abst.),
8, 229: mixture of, with benzene does not separate in layers,
17, 932: new compounds of, with ammonia (abst.), 4, 234: solu-
bility of sulphur in (abst.), 1, 99: use of, in milk analysis, - 8, 205
Acetic acid, allyl-, behavior of, with sodium hydroxide, 17, 1: bromdi-
chlor- (abst.), 4, 269: chlordibrom- (abst.), 4, 269: diallyl-, action
of hydrobromic acid and bromine on, 4, 271: dichlor-, and p-tolu-
idine, formation of $p$ -toluyl- $p$ -methylimisatin from (abst.), 7, 205:
diphenyl-, synthesis of (abst.), 2, 436: heptyl-, and heptylmalonic
acid, 5, 10: $p$ -nitrobenzoyl- (abst.), 7, 31: phenoxy- (abst.), - 2, 292
Acetic anhydride, action of, on pyrrol (abst.), 7, 84
Acetoacetate, ethyl, action of chlor- and bromacetone, acetophenone
bromide, and phenylbromacetic acid on (abst.), <b>6</b> , 85: condensa-
tion product of phenanthraquinone with (abst.), 5, 92
Acetobenzoic anhydride (abst.), 2, 431
Acetone from acetic acid, 18, 231: action of allyl iodide, butyl iodide,
and zinc upon (abst.), 7, 58: action of aluminum chloride upon
and sine upon (about), 1, jo . action of arammam emoriae upon

(abst.), 5, 117: action of boron fluoride upon (abst.), 1, 400:
action of, on phenanthraquinone (abst.), 4, 221: condensation of
(abst.), 4, 268: contraction of aqueous solutions of, 16, 618: detec-
tion of (abst.), 8, 24: determination of, in wood spirit (abst.),
4, 196 : diethoxy- (abst.), 10, 188 : improvement in the manufac-
ture of, 17, 187: improvements on Squibb's method for estimating,
19, 316: literature of estimation of, 19, 319: in methyl alcohol
(abst.), 10, 195: table of specific gravity for aqueous, 17, 200:
volumetric determination of, 18, 1068: use of, as solvent in the
preparation of tannins, 15, 344
Acetone, acetyl-, derivatives of (abst.), 9, 171: acetyl-, homologues of
(abst.), 10, 14: diethoxy-, 10, 188
Acetone and chloroform, acid obtained by action of alcoholic potas-
sium hydroxide on (abst.), 9, 102
Acetonitrile, preparation of (abst.), 2, 432
Acetonitrile, dichlor-, a polymeric (abst.), 7, 177: ethoxy-, - P. 2, 124
Acetonylacetone (abst.), 7, 147
Acetophenone bromide, action of, on ethyl acetoacetate (abst.), - 6, 85
Acetophenones, brom-, action of amides on (abst.), 9, 195
Acetyl chloride, action of, on benzaldehyde in the presence of zinc
dust (abst.), 5, 132: action of, on fumaric acid (abst), 4, 221: com-
pound of, with titanium tetrachloride (abst.), 2, 430: and glacial
acetic acid, action of, on fumaric acid (abst.), 5, 18
Acetyl compounds of carbohydrates (abst.), 2, 225
Acetyl, determination of, by means of magnesia (abst.), 1,547
Acetylacetone, derivatives of (abst.), 9, 171: formation of (abst.),
9, 172: homologues of (abst.), 10, 14
Acetyldiphenylamine, action of phosphorus pentachloride on (abst.), 4, 264
Acetylene, formation of, from iodoform (abst.), 6, 37: halogen com-
pounds of (abst.), 5, 29, 58: heat of combustion of (abst.), 4, 229:
illumination with, for polariscope, 18, 179
Acetylene hydrocarbon, caprylidene (abst.), 9, 6: hydrocarbons, silver
nitrate as a reagent for (abst.), 10, 87
Acetylphenyllactic acid, behavior of (abst.), 7, 143
Acid, free, in tan liquors, titration of (abst.), 1, 367: new, isomeric
with itaconic acid (abst.), 5, 124
Acid residues from the manufacture of gun-cotton, regeneration of
(abst.), 9, 38
Acidimetry and alkalimetry, 12, 131
Acidity in soils, the relative sensibility of plants to, 20, 103.
Acids, antiseptic action of (abst.), 1, 496: aromatic, action of ibdine
on silver salts of (abst.), 4, 264: aromatic, action of nitrous anhy-
dride on, 12, 55: aromatic amido- (abst.), 2, 370: complex, con-
taining boric acid (abst.), 2, 434: complex inorganic (abst.),
1, 111, 482: haloid, action of, on hydrocyanic acid (abst.), 4, 221:
monobasic organic, amidines and thiamides of (abst.) 2, 188

organic, halogenized and hydroxylized (abst.), 4, 175: solubility of salts of weak, in stronger acids, 20, 742: solubility of, in solutions of salts of other acids, 20, 751: unsaturated aromatic (abst.), 1, 242: unsaturated monobasic, etherification of (abst.), 2, 172: unsaturated, researches upon (abst.), 1, 236: weak, reagent to detect acid nature of (abst.), 8, 79: weak, reciprocal displacement of (abst.), 1, 279  Acids, fatty, action of superheated steam upon (abst.), 1, 403: boiling-
points and specific volumes of the esters of (abst.), 8, 228: decomposition of, by heat (abst.), 8, 25: and their derivatives, heats of combustion of (abst.), 8, 183: determination of, in butter, 16, 673: determination of freezing-point of, 16, 665: determination of, in oils (abst.), 6, 100: determination of the points of fusion and solidification of (abst.), 8, 65: heat of combustion of (abst.), 8, 83: in oils (abst.), 11, 55: oxidation of (abst.), 8, 184: products of the dry distillation of the silver salts of (abst.), 8, 64: separation of solid and liquid, 17, 289, 740: thermocliemical relations of
(abst.), 8, 82: toxic effects of (abst.), 8, 229: volatile, occurrence
of, in urine (abst.), 8, 86
Acids and alcohols of aliphatic series, thermochemical relations of
(abst.), 8, 82
Aconitates (abst.), 4, 231
Aconitic acid, occurrence of, in cane juice and raw sugar, - P. 1, 220
Acridine (abst.), 2, 98: production of (abst.), 6, 86
Acridine picrate (abst.), 7, 84
Acridity in plants, cause of, 13, 215
Acrolein, action of, on xylidine, 5, I
Acrolein, diphenylamine-, 4, 32
Acrolein-urea, 4, 58: with remarks upon Schiff's publications upon
condensed ureas, 5, 36
Acrylic acid, dichlor-, decomposition of, by alkalies (abst.), 1, 163:
$\beta$ -dipropyl-, from $\beta$ -dipropylethylenelactic acid (abst.), 7, 83: eth-
oxy-, from $\alpha$ -dichlorpropionic acid (abst.), 12, 227
Actinometry, new method in, 2, 249
Adams and Wanklyn method for estimating fat in milk, - 12, 488
Adenine and hypoxanthine (abst.), 12, 161
Adipic acid, dichlor-, preparation from $\alpha$ -dichlorpropionic acid
(abst.), 8, 35: dichlor-, properties of (abst.), 8, 36
Adulteration of food, drink, drugs, etc., 3, 60
Affinity, chemical (abst.), 1, 295: chemical, methods of estimating
(abst.), 1, 497: relative, of oxygen, sulphur, and the halogens,
75-5
Affinities, relative, of oxygen and the halogens (abst.), 1, 280
Agricultural chemistry, notable events in the progress in, 14, 83
Agricultural Chemists, Official, meeting of, 16, 431
Approximate application of terious surpliate in (abst.) 7, 5/

Air, apparatus for determination of oxygen in (abst.), 1, 585: deter-
minations of free and albuminoid ammonia, and of ozone, during
epidemic of yellow fever, 1, 263: determination of moisture in
(abst.), 2, 171: hygienic analysis of (abst.), 9, 219: impurities in,
in Cleveland, 17, 105: presence of nitrous acid in (abst.), - 12, 69
Air-bath, a modified, 20, 271: new form of, 16, 31
Air-pump, Sprengel, on the development of (abst.), 6, 97
Air-thermometer, new form of, for technical purposes, 12, 277
Albinism, vegetable, chemical study of (abst.), 2, 342
Albumin in acid urine, precipitation of (abst.), 1, 348: detection of
small quantities of (abst.), 9, 37: determination of, according to
Millon and Commaille (abst.), 9, 47: determination of, in bacte-
rial urine (abst.), 12, 415: determination of, in cow's milk, 16, 712:
determination of sulphur in (abst.), 12, 176: determination of, in
urine (abst.), 10, 197: egg, on the coagulation of (abst.), 8, 73:
formation of urea from (abst.), 12, 475: influence of carbohydrates
and fatty bodies on the putrefaction of (abst.), 8, 230: products
formed by the putrefaction of (abst.), 2, 174: separation of, from
peptone (abst.), 10, 157: test for (abst.), 12, 415
Albumin compounds, crystalline, preparation of (abst.), - 1, 494
Albuminoid matter in plants, relation of, to the formation of oxalic
acid (abst.), 9, 7: nitrogen, sources of error in determining, 18, 464:
substances (abst.), 6, 95
Albuminoids (abst.), 2, 225: determination of, in food for cattle (abst.),
1, 565: influence of tartrates and lactates on the digestion of,
12, 394: of maize, 14, 313: in pumpkin seeds, decomposition of
(abst.), 2, 136: uranium acetate as a reagent for (abst.), - 7, 291
Alchemical chart, 13, 293
Alchemical medals, exhibition of, 33, 33
Alcohol, absolute, 15, 126: action of chloride of lime upon (abst.),
r, 496 : action of, on diazo-compounds (abst.), 7, 148 : alleged tests
for (abst.), 5, 233: allyl, formation of (abst.), 9, 100: Bang's pro-
cess for detection of impurities of (abst.), 10, 27: detection of, in
essential oils and chloroform (abst.), 1,582: detection and estima-
tion of small quantities (abst.), 1, 574: detection of traces of water
in, 1, 38: determination of, with cobalt sulphocyanate, 2, 340:
determination of, in fermented liquors (abst.), 1, 572, 573 : deter-
mination of small quantities of, 20, 293: diatomic, derived from
β-naphthol (abst.), 4, 77: examination of (abst.), 12, 118, 119:
mercuric nitrate as a reagent for (abst.), 1, 339: note on the purifi-
cation of, II, 124: in statu nascendi, P. I, 173: untaxed, for use
in the arts, 18, 1106: use of fluorides in manufacture of, - 14, 212
Alcohol lamp with constant level (abst.), 6, 99
Alcohols, aluminum (abst.), 4, 142: compounds of, with lithium and
magnesium chlorides (abst.), 2, 135: esterification of, influence of
structure and molecular weight upon (abst.), 1, 256: of fusel oil,
14, 45 : higher, and hydrocarbons, obtained from American petro-

leum (abst.), 6, 95: polyhydric, synthesis of (abst.), 9, 171;
15, 704: synthesis of, in the pyridine series (abst.), - 12, 160
Alcohols and acids of aliphatic series, thermochemical relations of
(abst.), 8, 82
Alcoholate of potassium hydroxide (abst.), 8, 273
Alcohol radicals, action of chlorine on the sulphides of (abst.), 10, 16:
action of water on haloid compounds of (abst.), 2, 65
Aldehyde, action of p-amidodimethylaniline on (abst.), 7, 230: am-
moniacal alkaline silver solution as reagent for (abst.), 5, 50:
Aldehyde-ammonia, hydrazine from (abst.), 12, 165
Aldehyde and ammonia reaction for determining constitution of
quinones (abst.), 4, 199
Aldehyde phenols, action of acetic anhydride on (abst.), - 2, 130
Aldehydes, action of, on phenanthraquinone (abst.), 4, 198: chlor-
inated, action of, on benzene (abst.), 6, 165: combination of
glycol with (abst.), 9, 172: condensation of compounds contain-
ing the dicarbonyl group with (abst.), 5, 101: condensation prod-
ucts of, with ethyl acetoacetate, etc. (abst.), 5, 101: of the hydro-
cinnamic acid series (abst.), 12, 231: reactions of (abst.), - 5, 239
Aldehydes and ammonia, action of, on benzil (abst.), 7, 31: and gly-
cols, combinations of (abst.), 10, 18
Aliphatic series, constitution of nitro-compounds of (abst.), 8, 202:
nitro-compounds of (abst.), 8, 274: properties of urethanes of,
8, 166: synthesis in, by means of aluminum chloride (abst.), - 9, 172
Alizarin, detection of (abst.), 2, 95: determination of (abst.), - 2, 95
Alizarin, $\beta$ -amido- (abst.), 7, 229
Alizarin blue, soluble (abst.), 5, 51: orange, preparation of (abst.), 5, 20
Alkali, caustic, determination of, in presence of carbonate (abst.),
4, 165: 10, 181: determination of, in silver nitrate (abst.), -
Alkali metals, estimation of, in silicates (abst.), 6, 312: reduction of
compounds of, by magnesium (abst.), 12, 152: vapor-densities of
(abst.), 2, 371
Alkali process, new (abst.), 10, 183: waste, recovery of sulphur from
(abst.), 10, 90
Alkalies, determination of, in ash of plants (abst.), 1, 357: determina-
tion of, in insoluble silicates, 12, 138: determination of, in sili-
cates (abst.), 1, 334, 536
Alkalimetry, new indicator for (abst.), 4, 166: and acidimetry, - 12, 131
Alkaline earths, volumetric determination of (abst.), 7, 251: hy-
droxides (abst.), 7, 283: nitrates, combination of silver nitrate
with (abst.), 8, 50: sulphides, action of nitrates on (abst.), - 6, 142
Alkaloid, a new, from cinchona bark (abst.), 4, 168: a new volatile
(abst.), 1, 286
Alkaloids, absorption spectra of (abst.), 6, 309: accompanying co-
caine, isocinnamic acid present in (abst.), 12, 161: artificial
(abst.), 2, 99: chemistry of lesser-known (abst.), 1, 553: chem-

istry of nitrogen as disclosed in the constitution of, 9, 128: color-reactions for (abst.), 4, 193: color-reactions of, with antimony and
bismuth trichlorides (abst.), 1, 544: detection of, in food, etc.,
(abst.), 4, 193: determination of, in cinchona bark (abst.), 1, 552;
4, 193: determination of, in plants (abst.), 1, 548: extraction of,
from cinchona bark (abst.), 4, 192: found in the human cadaver
(abst.), 1, 554: nature and properties of (abst.), 8, 23: of nux
vomica (abst.), 7, 116: of opium, separation of (abst.), 9, 176:
of opium, solubility of (abst.), 9, 216: perchloric acid as a reagent
for (abst.), 1, 545: periodides of, 20, 706: presence of, in old flours
(abst.), 8, 167: of quinine group, polarized light for examination
of, P, 2, 57: of quinine group, pyridinetricarboxylic acid from
(abst.), 2, 172: sabadilla, 14, 226: synthesis of (abst.), 7, 78:
vegetable, acidimetric estimation of, 17, 822: volumetric estima-
tion of, as periodicles, 20, 706
Alkaloidal extracts, separation of, 18, 1104: salts, nomenclature and
notation of, II, 13c
Alkyl chlorides, action of, on ammonia and on methylamines (abst.),
8, 95 : disulphoxides, synthesis of so-called (abst.), 4, 176 : haloid
salts and quinoline, bases resulting from addition of (abst.), 4, 265:
iodides, note on, 13, 144
Alkylation of amides (abst.), 12, 159
Alkylsulphonated fatty acids, formation of sulphones from (abst.), 7, 203
Allantoxanic acid, structure of (abst.), 6, 135 Alloxan series, uric acid derivatives of, syntheses of (abst.), - 1, 172, 275
Alloys, apparatus for determination of melting-point of (abst.),
4, 263: explosive, of zinc with platinum metals (abst.), 4, 240:
formation of, by pressure (abst.), 4, 269
Alloys and metal work, ancient, composition of (abst.), 4, 171
Alloys of aluminum (gold, silver, nickel), 16, 485: of lead and tin,
blow-pipe reactions with, P. 2, 108: of lead and tin, and lead and
antimony, commercial valuation of 16, 541: of iron with molyb-
denum, tungsten and chromium, as solutions, 16, 735: of tung-
sten, determination of tungsten in (abst.), 11, 53
Allyl alcohol, formation of (abst.), 9, 100: alcohol, chlor-, and some
of its derivatives (abst.), 5, 119: iodide, action on phenol in the
presence of lime or aluminum foil (abst.), 5, 234: iodide, prepara-
tion of (abst.), 9, 100: iodide, butyl iodide, and zinc, action of, on
acetone (abst.), 7, 58: sulphocyanate, aromatic bases isomeric
with (abst.), 2, 93
Allylacetic acid, behavior with boiling sodium hydroxide solution, - 17, 1
Allylanisoil, derivatives of (abst.), 2, 171
Allyldiethylcarbinol (abst.), 2, 54: hydrocarbon obtained from (abst.), 7, 60
Allyldimethylcarbinol, coefficient of refraction of hydrocarbon from
(abst.), 7, 85
Allyldipropylcarbinol (abst.), 2, 54
Allylene, action of mercuric oxide on (abst.), 6, 167

Allylmalonic acid, action of bromine on (abst.), 4, 271: behavior of,
with boiling sodium hydroxide solution, 17, 1
with boiling sodium hydroxide solution, 17, 1 Allylsuccinic acid and a carboxycaprolactonic acid (abst.), 5, 69
Allylsulphuric acid and some of its salts (abst.), 7, 208
Allylsulphuric acid and some of its salts (abst.), 7, 208 Almond oil, unreliability of test for (abst.), 8, 87
Almonds, proteids of, 18, 610
Alum, ammonia, fractional dehydration of, etc., 4, 180: clarification
of water by (abst.), 7, 200: cubic (abst.), 2, 370: detection of, in
bread (abst.), 4, 188: detection of, in flour (abst.), 1, 566: influ-
ence of, on digestion, 16, 587
Alum baking powders, influence of, on digestion, etc. (abst.), - 10, 171
Alum phosphate baking powders, 12, 452
Alums, chrome, accommodation of (abst.), 2, 370: examination of
the formation of, by the differential dilatometer (abst.), 7, 77:
expansion of (abst.), 5, 27; 7, 77: formation of, by electrolysis, 20, 759: precipitation of, by sodium carbonate (abst.), 4, 258:
water of combination of (abst.), 8, 272; 9, 100
Alumina, amount of, in pure flour (abst.), 1, 110: determination of,
in phosphates, 17, 260: as a natural constituent of wheat flour
(abst.), 9, 169
Alumina residues from baking powders, solubility of, in gastric juice, 9, 27
Alumina and silica in pure wheat, relation between amounts of (abst.), 1, 110
Aluminates of potassium and sodium in solution, 2, 27
Aluminous mineral species, evigtokite and liskeardite (abst.), - 5, 97
Aluminum, 15, 221, 276: action of nitric acid upon, 19, 711: alloys of,
with gold and silver, 16, 485: analysis of, 18, 766: atomic weight
of (abst.), 1, 277, 321; 20, 164: determination of (abst.), 7, 296:
determination of, in alloys, 18, 772: determination of, in the pres-
ence of iron and phosphoric acid (abst.), 10, 66: as an elec-
trode, 20, 302: notes on, 16, 485: pure metallic. properties of,
4, 145 : separation of, from iron, 17, 931 : (abst.), 7, 124 : separa-
tion of, from manganese (abst.), 1, 325: separation of, from man-
ganese, zinc, cobalt and nickel (abst.), 1, 529: solder for, 16, 881:
use of, for condensers, 19, 153: valence of, 4, 180
Aluminum alcohols, products of decomposition of, by heat (abst.),
4, 142: basic sulphate, remarks about, 16, 153: chloride, action of,
on brombenzene (abst.), 4, 174: chloride, action of, on the halides
of naphthol (abst.), 8, 94: chloride, decomposing action exercised
by, on certain hydrocarbons (abst.), 7, 142: chloride, decomposi-
tions produced by action of (abst.), 4, 170: chloride, new reaction
of (abst.), 9, 172: chloride and bromide, reactions in the presence
of (abst.), 2, 172: hydroxide, behavior of hydrogen sulphide to-
wards alkaline solutions of (abst.), 1, 163, 334: hydroxide, influ-
ence of, on digestion, 16, 857: hydroxide as a precipitant for sus-
pended clay, 13, 100: oxychlorides (abst.), 7, 284: phosphate,
decomposition of, at high temperatures (abst.), 5, 119: salts,
effects of, on gastric juice in digestion, 2, 13

Aluminum and iron, salts of, useful in dyeing (abst.), 6, 172
Alunite (abst.), 5, 117
Amalgams of chromium, iron, cobalt, nickel, and manganese (abst.),
I 276: of iron etc P I 40
1, 276 : of iron, etc., P. 1, 49 Amandin, a proteid of the almond and the peach, 18, 610
Amandin, a protein of the almond and the peach, 18, 610
Amarine and lophine, constitution of (abst.), 4, 225
Amber cane, Minnesota early, examination of, 1, 44
American Chemical Society, organization of, P. 1, 3, 18
American chemical societies, early, 19, 717
American chemist, the (presidential address), 14, 331
Amide of the sugar cane, additional notes on, 20, 133
Amides, action of bromine on (abst.), 5, 21: action of, on bromaceto-
phenones (abst.), 9, 195: alkylation of (abst.), 12, 159: aromatic,
direct conversion of, into azo-compounds, 3, 39: formation of ba-
sic compounds from (abst.), 4, 206: of the monobasic acids of the
aliphatic series, preparation of (abst.), 5, 25: preparation of ni-
triles from, P. 2, 123
Amidines, new class of (abst.), 5, 24: and imido-ethers, action of hy-
droxylamine upon (abst.), 6, 236: and thiamides of monobasic
organic acids (abst.), 2, 188 Amido bases, phenolates of (abst.), 5, 100
Amido bases, phenolates of (abst.), 5, 100
Amido group, replacement of, in aromatic amines by the halogens
(abst.), 7, 119
Amido-acids, action of mustard oils on (abst.), 7, 85: aromatic (abst.), 2, 370
Amidoazo-compounds, action of hydrochloric acid upon (abst.), 7, 86
o-Amidoazo-compounds (abst.), 6, 82
β-Amidobutyric acid (abst.), 2, 367
Amidomercaptans of the fatty series, anhydro-bases from (abst.), 12, 158
Amidoximes and azoximes, behavior of (abst.), 8, 75
Amines, action of bromine on, in alkaline solution (abst.), 5, 129: ac-
tion of, on dichlornaphthoquinone (abst.), 4, 265: action of, on
quinone (abst.), 8, 23: action of, on quinones (abst.), 4, 226, 265:
action of sodium hydroxide, calcium oxide, and magnesia on
(abst.), 6, 27: aromatic, action of iodine monochloride upon (abst.),
1, 484: aromatic, compounds of, with silver nitrate and sulphate
(abst.), 1, 483: aromatic, a few benzoyl derivatives of (abst.), 7,
245: aromatic, nitriles and carboxylic acids from (abst.), 6, 85:
aromatic, replacement of the amido-group in, by the halogens
(abst.), 7, 119: use of, in dyeing (abst.), 8, 231: decomposition
of (abst.), 9, 104: heat of combustion of some (abst.), 7, 289: in
juice of sugar cane, 18, 743: primary, action of benzotrichloride
on, 1,524
Ammonia, action of alkyl chlorides on (abst.), 8, 95: action of, on di-
and tri-halogen substitution products of the hydrocarbons (abst.),
12, 228: action of, on molybdenyl chloride, 15, 61: action of, on
nitrosophenols (abst.), 7, 86: action of, on wolframyl chloride,
15, 68: commercial, tarry ingredients in (abst.), 1, 92: com-
13, 5. commercial, early ingredicites in (abst.), 1, 92. com-

pounds of uranyl chloride with (abst.), 7, 121: decomposition of, by heat (abst.), 6, 73: determination of nitric acid by transformation into, P. 2, 9: determination of, in potable waters (abst.), 1, 565; displacement of, by magnesia (abst.), 9, 99: electrolysis of carbon in (abst.), 8, 178: emission of, by vegetable soils (abst.), 10, 12: estimation of, by Schlösing's process, for plant extracts (abst.), 6, 41: formation of, 11, 40, 44: heat of formation of (abst.), 2, 433: liquefaction of, apparatus for (abst.), 4, 220: new compounds of nitric and acetic acids with (abst.) 4, 234: process for determination of, in water analysis, 5, 104: separation of, from trimethylamine, 18, 670: used in United States, 15, 567: from water, collector for the distillation of, - 20, 286

Ammonia and aldehydes, action of, on benzil (abst.) 7, 31: and ni-

trous acid, formation of, from free nitrogen (abst.), - - 12, 350 Ammonia soda process, influence of, on the value of hydrochloric acid

and chlorine (abst.), - - - - - 6, 174

Ammoniacal solutions, apparatus for evaporating (abst.), - 9, 220

Ammonio-silver compounds, history of (abst.), - - - 6, 73

Ammonium acid sulphates, P. 1, 88: alum, fractional dehydration of, 4, 180: bases derived from quinoline (abst.), 7, 119: benzenesulphonate, products of the dry distillation of (abst.), 7, 231: bromoselenate, preparation of, 20, 566, 571: chloride, dissociation of, by heat, 12, 48: chloride, process for obtaining, from the nitrogen of coal, coke, etc. (abst.), 10, 184: chloride solution, standard, alteration of, in the dark, P. 2, 147: chloride, standard solution of, action of light and darkness on, 2, 246: citrate solution, method of neutralizing, 18, 457: citrate solution, preparation of, 17, 47: citrate solution, preparation of a neutral, 20, 585: compounds, new class of (abst.), 2, 224: hydroxide, action of, on the halogen salts of lead, 6, 218: hydroxide, on the existence of (abst.), 6, 189: molybdate, existence of phosphoric acid in (abst.), 6, 98: molybdate solution, a modified, 18, 445: nitrate, production of, in ozonization of air by phosphorus, 3, 5: nitrate, rate of decomposition of (abst.), 5, 235: nitrite, and by-products in ozonization of air, etc., 1, 145: nitrite, decomposition of, by means of platinum sponge (abst.), 12, 473: nitrite and hydrogen dioxide, production of, in burning hydrogen and hydrocarbons in air, 6, 17: oxalate, acid, influence of, on the solubility of neutral oxalate (abst.), 8, 71: palladium bromide, 16, 467: phosphomolybdate, gravimetric estimation of phosphoric acid as, 18, 23: phosphomolybdate, reducing action of zinc on, 17, 747: ruthenium nitrosochloride, 16, 390: salts, action of, on glycerol (abst.), 8, 273: salts, action of, on metallic sulphides (abst.), 1, 331: salts, action of sodium hydroxide, calcium oxide, and magnesium oxide on (abst.), 6, 27: sulphate, solubility of copper sulphate in the presence of (abst.), 8, 34: sulphide, dissociation of (abst.), 1, 402: sulphocyanide, titration of halogens, copper, and mercury with (abst.), 1, 323:

thiocarbamate, use in analytical work (abst.), 9, 115: thiosul-
phate, formation of, in gas generators, 8, 47: selenide, - 20, 27
Amyl alcohol, dextrorotatory (abst.), 1, 273: alcohol, Jorissen's reaction
for (abst.), 4, 196, 207: chloracetate (abst.), 8, 72
$\beta$ -Amylan and $\gamma$ -amylan (abst.), 4, 143
Amylideneaniline (abst.), 1, 162
Amylnaphthalene, preparation of (abst.), 6, 162
Analyzing and sampling commercial products, standard methods of
Analysis, desirability of and practicability of establishing uniform
methods of (abst.), 6, 30: indirect, calculation of, 17, 466: micro-
chemical, of minerals and rocks (abst.), 1, 95: of organic com-
pounds containing halogens or nitrogen (abst.), 1, 254: organic,
in the wet way (abst.), 1, 542: proximate, of plants (abst.), - 2, 220
Analytical chemistry, recent advances in, 15, 376: reviews or reports
on progress of, 1, 83, 320, 527; 4, 160, 189
Analytical operations and apparatus (abst.), 7, 92, 180
Analytical work, the dignity of (presidential address) 20, 81
Anethol. See allylanisoïl.
Angelic and methylcrotonic acids, contributions to the history of
(abst.), 1, 396
Angelic and tiglic acids, constitution of (abst.), 1, 241: contributions
to the knowledge of (abst.), 1, 240
Anglesite, reproduction of, by wet process (abst.), 10, 113
Anhydrides, mixed (abst.), 10, 13: formation of, in the succinic acid
series (abst.), 12, 157
Anhydro-bases from amidomercaptans of the fatty series (abst.), - 12, 158
Anhydrolupinin (abst.), 5, 17
$\beta$ -Anilido- and $\beta$ -amidobutyric acid (abst.), 2, 36;
Aniline, action of phosphorus pentasulphide on (abst.), 10, 40: appli-
cation of, in qualitative analysis (abst.), 5, 52: compounds of,
with metallic salts, 3, 136: compounds of nickel and cobalt chlo-
rides with (abst.), 1, 165: compound of oenanthaldehyde with, 5,
2: introduction of methyl or ethyl groups into (abst.), 5, 64: new
salts of (abst.), 1, 286: synthesis of homologues of (abst.), 4, 228:
titration of (abst.), 6, 27: use of, as absorbent of cyanogen (abst.), 10, 156
Aniline black (abst.), 7, 63: black, photographic process by means of,
8, 189: colors, detection of, in wines, fruit juices, etc. (abst.), 9,
201: derivative of $\alpha$ -chlordinitrophenol, P. 2, III
Aniline carbonate (abst.), 10, 114: dichromate (abst.), - 9, 173
Aniline, p-brom-, derivatives of (abst.), 2, 224: o-nitro-, method of
preparing (abst.), 7, 227
Anilinesulphonic acid, o-nitro- (abst.), 7, 227
Anilines, chlor- and chlornitro- (abst.), 2, 57
Anisoil, m-nitro-, behavior towards animonia (abst.), - I, 160
Anisoilphthaloylic acid (abst.), 8, 182
Anthemene from Roman camomile (abst.), 6, 191

17, 667

ical history of a case of,

Antimonyl potassium mucate and saccharate (abst.), 6, 35
Antiseptic soap (abst.), 10, 92
Antiseptic values of chlorides, nitrates, and sulphates (abst.), - 9, 190
Antiseptics, behavior of, toward salivary digestion, 14, 4: effect of, on
the action of diastase (abst.), 10, 91: influence of, upon peptic di-
gestion, 19, 889: two new (abst.), 4, 242: see also Disinfectants.
Antiseptics and bacteria (abst.), 6, 79
Aphis, honey from, 14, 350
Apparatus, analytical (abst.), 7, 92, 180: for automatic filtration, 19,
284: for delineation of curved surfaces, 13, 263: for determination
of melting-points (abst.), 4, 169: for determining solubilities, 16,
715: for effecting solution, 19, 286: extraction, for fats (abst.), 4,
250: graduated, government facilities for standardizing 20, 912:
for heating sealed tubes, 13, 182: illuminating, 17, 496: for lab-
oratory (abst.), 7, 150: for liquefaction of ammonia (abst.), 4, 220:
for measuring reagents, 19, 282: for measuring sterilized solutions
(abst.), 9, 123: for moisture experiments with soils, 19, 623: for
obtaining distilled water from service steam, P. 1, 211: for promo-
ting the interaction of liquids and gases, 15, 361: for rapid gas
analysis, 3, 91: for reducing measured volumes of a gas to normal
conditions (abst.), 6, 97: for the technical analytical laboratory, 19, 281
Applied Chemistry, Second International Congress of, 20, 137, 234, 550
Applied chemistry, the year's progress in (review), 20, 967
Apricot, peach, and walnut oils (abst.), 8, 184
Arabic acid, composition of, etc. (abst.), 6, 87
Aragonite, note on, 1, 79: containing lead, analysis of, - P. 2, 14
Arc light, action of, on gases (abst.), 12, 351
Areometers, descriptions of, corrections for, etc., P. 1, 2, 8, 19, 40, 48:
early mention of, 13, 252: and graduated glass vessels, verifica-
tion of, P. 2, 128
Argol. See Tartaric acid.
Argon, 16, 719; 17, 219: atomic weight of, 18, 211: bibliography of,
19, 133: compounds of, 17, 422: a constituent of uraninite (note),
17, 421: density of, 20, 170: discussion on, in Royal Society, 17,
236: in gas given off by heating metallic oxides in hydrogen, 20, 232: liquefaction and solidification of, 17, 233: present knowledge
of, 19, 124: the spectra of, 17, 230: use of, in thermometry, - 17, 477
Arita porcelain, raw materials used in making, 2, 315 Aromatic lead compounds (abst.), 10, 39: organic salts of phosphoric
acid, preparation of (abst.), 5, 18: para-compounds, so-called, in-
troduction of azo group in (abst.), 7, 32: products of animal body
(abst.), 2, 226: sulphonic acids, action of fused alkalies upon
(abst.), 2, 294
Aromatic bases, compounds of, with metallic salts, 3, 134: condensa-
tion products of (abst.), 5, 19
Aromatic compounds, action of iodine upon (abst.), 1, 393: action of
iodine on (abst.), 2, 369: estimation of nitrogen by Kjeldahl

method in, 7, 108: researches on isomerism in (abst.), 7, 110	9
Aromatic hydrocarbons, oxidation of substitution products of (abst.),	
I, II5; 2, 22	I
Arsenate, ferric, production of a crystallized (abst.), - 2, 13.	2
Arsenates, action of hydrochloric acid gas upon, 17, 683: a few crys-	
tallized (abst.), 8, 165: neutral to litmus (abst.), 4, 272: of nickel,	
conditions of formation of, etc. (abst.), 8, 4	9
Arsenic, amounts of, found in wall papers, etc., 2, 339: atomic weight	
of, 18, 1049: 19, 363: detection of, by Marsh's test (abst), 12, 353,	
477: detection of, by Reinsch's test, 18, 953: detection of, by	
Schneider's process, modified (abst.), 1, 555: determination of,	
in metallic copper (abst.), 4, 167: determination of, in pyrites	
(abst.), 10, 66: determination of, volumetric (abst.), 1, 333: in	
glycerol, 17, 883: occurrence of, in bone phosphate fodder (abst.),	
11, 54: poisonous effects of, chemical theory of (abst.), 4, 268:	
poisonous nature of, chemical cause of, 2, 115: post-mortem diffu-	
sion of, 13, 283: recovery of, 14, 223	3
Arsenic compounds, aromatic, formation of (abst.), - 5, 63	3
Arsenic, separation of, from antimony (abst.), 1, 332; 8, 76; 9, 11:	
from bismuth, electrolytic, 15, 202: from cadmium, electrolytic,	
15, 201: from cadmium, by hydrobromic acid gas, 20, 804: from	
cadmium, by hydrochloric acid gas, 18, 1039: from cobalt, by hy-	
drobromic acid gas, 20, 808: from cobalt, by hydrochloric acid	
gas, 18, 1042: from copper, by hydrobronic acid gas, 20, 805:	
from copper, by hydrochloric acid gas, 18, 1039: from gold (abst.),	
8, 78: qualitative (abst.), 10, 56: from iron, by hydrobromic acid	
gas, 20, 809: from iron, by hydrochloric acid gas, 18, 1040: from	
platinum (abst.), 8, 78: qualitative (abst.), 10, 156: from silver	
by hydrobromic acid gas, 20, 806: from silver, by hydrochloric	
acid gas, 18, 1039: from tin (abst.), 1, 483; 8, 76; 9, 11: from	
vanadium, by hydrochloric acid gas, 18, 1051: from zinc, by hy-	
drochloric acid gas, 18, 1041	
Arsenic tests of the U. S. Pharmacopoeia, 16, 58c	)
Arsenic and antimony, identification of, 13, 210: poisoning by, chem-	
ical history of a case of, 17, 667	
Arsenic, antimony, tin, and lead, analysis of alloys of, 17, 869	
Arsenic and copper left on sprayed fruit, 16, 71	Ĺ
Arsenic, phosphorus, sulphur, etc., estimation of, in native copper	
(abst.), 6, 241	I
Arsenic acid, action of hydrogen sulphide on (abst.), 10, 11: prep-	
aration of (abst.), 7, 285: reduction of, in solution (abst.), 7, 123:	
separations of, from metals (abst.), 1, 533: dimethyl-, physiological off other of (abst.), 2, 160, physiological off other of (abst.), 2, 160, physiological	
cal effects of (abst.), 1, 160: phenyl- and diphenyl-, physiological	
effects (abst.), 1, 159 Arsenides, formation of, by pressure (abst.), 5, 68	
Arsenides, formation of, by pressure (abst.), 5, 68 Arsenious oxide, solubility of, in coffee decoctions, P. 1, 2, 56	
Arsenomolybdic acid (abst.), 6, 286	
5, 200	,

Arsenopyrite, chemical behavior of, 16, 624: constitution of, - 19, 948
Arsine. See Hydrogen arsenide.
Arsenotungstic acid (abst.), 6, 306
Asbestos, artificial, see French chalk: use of, in filtration (abst.), 10, 60
Asbestos cloth for blotting paper in milk analysis (abst.), 9, 175:
filters, note on (abst.), 4, 248
Ash, determination of (abst.), 10, 68, 194: of certain weeds, anal-
yses of, 2, 24: for extraction of iodine, preparation of (abst.),
2, 434: of plants, determination of alkalies in (abst.), 1, 357:
of raw tanning materials, composition of the, 20, 338
Ashes, volcanic, from Mt. Etna, analysis of (abst.), 4, 232: from
Krakatoa, in 1883 (abst.), 6, 127: from Vesuvius, composition of
(abst.), 4, 23
Ash analysis, changes in official methods of, 16, 792
Asparagine, precipitation of (abst.), 5, 63
Asphalt, analysis of, 17, 55: determination of sulphur in 20, 882:
examination of (abst.), 4, 196: technical analysis, of, 16, 809: 18, 273
Aspirator, new, 5,71:7, 106
Assay, scorification, loss of gold and silver during, 16, 313: for
silver, commercial, accuracy of, 16, 505: for fine silver, modified
method of, 19, 812
Assay furnace, gas (abst.), 6, 242
Astringents in wine, determination of (abst.), 4, 242 Atmosphere: see Air.
Atmosphere nitrogen, assimilation of, 12, 145
Atomic volume as a periodic function, 20, 935 Atomic weights, report of committee, 16, 179; 17, 201; 18, 197;
19, 359; 20, 16; Atoms, determination of number of, in a molecule (abst.), - 6, 4;
Atropic and isatropic acids (abst.), 1, 24; Atropine, contributions to history of (abst.), 4, 176
Auramines (abst.), 9, 212
Auric chloride, anhydrous, solvents of (abst.), 8, 34: combination
of, with sulphur tetrachloride and selenium tetrachloride
(abst.), 8, 20
Aurin (abst.), 2, 51: by-product in the manufacture of (abst.),
5, 234 : formation of (abst.), 1, 386
Avenalin, a globulin from the oat kernel, 18, 62
Axle grease, preparation of (abst.), 8, 26
Azoanthrol dyes (abst.), 4, 266
Azobenzene, on the direct substitution products of (abst.), - 5, 54
Azo colors, 1, 465; 2, 446; (abst.), 4, 173: belonging to tetrazo
group, 3, 20: spectra of, 6, 117, 149
Azo group, introduction of, in the so-called aromatic para com-
pounds (abst.), 7, 32
Azo compounds from aromatic amides, 3, 39: of derivatives of acet-

anilide (abst.), 7, 55: new (abst.), 1, 394; 2, 95: nomenclature
of complex (abst.), 5, 24: secondary and tertiary, researches on
(abst.), 6, 94
<i>p</i> -Azocresol (abst.), 6, 161
Azo and disazo compounds of cresols (abst.), 7, 54
Azoimide. See Hydrazoic acid.
Azonaphthalene (abst.), 7, 228
Azophenol, dichlor-, constitution of (abst.), 1, 493
Azophenols (abst.), 1, 65
Azotometer, Scheibler's calcimeter used as an (abst.), - 1, 375
Azotometry, remarks on (abst.), 6, 96
Azoximes and amidoximes, behavior of, 8, 75
Azylines (abst.), 5, 52
Bacillus anthracis, heating of cultivations of (abst.), 6, 130
Bacillus ferment of urea, researches on the (abst.), 1, 488
Bacillus of tuberculosis, fats contained in, 18, 449: some products of, 19, 782
Bacillus tuberculosis and B. mallei, composition of, - 17, 605
Bacteria, chemical composition of (abst.), 2, 136: in milk sugar,
18, 687: presence of, in living healthy animals (abst.), 2, 289:
study of gas-producing, 18, 157: testing water for (abst.), - 1, 103
Bacteria counter, a new, 20, 507 Bacteria and antiseptics (abst.), 6, 79
Bacterial growth, chemical products of, and physiological effects, 13, 61
Bacteriological examination of water, sanitary value of, - 19, 591
Baking powders, alum, influence of, on digestion, etc. (abst.), 10, 171:
alum phosphate, 12, 452: solubility of alumina residues from, in
gastric juice, 9, 27
Balance, device for adjusting, 16, 699: for first year's work in general
chemistry 18, 189: safety attachment for riders of, - 16, 764
Bang's process for the detection of impurities in alcohol (abst.), - 10, 27
Banquet to Messrs. Mond and Tyrer, 17, 997
Barium, atomic weight of, 16, 185; 17, 205: separation of, from stron-
tium (abst.), 12, 118, 410, 501
Barium camphorate (abst.), 6, 91: cesium ferrocyanide, 20, 33: cesium
ruthenocyanide, 20, 31: chloride, decomposition of, by potassium
oxalate (abst.), 2, 346: chloride, volatility of, 19, 156: chromate,
crystallized, manufacture of (abst.), 1, 279: dioxide, derivatives
of (abst.), 2, 365: ferrate, reactions of, 17, 765: ferrocyanide, use
of organic bases in preparing, 17, 927: hydroxide for absorbing
carbon dioxide, 17, 247: hydroxide, preparation of (abst.), 7, 65:
permanganate, method of preparing (abst.), 6, 77: potassium
ferrocyanide, 20, 32; potassium ruthenocyanide, 20, 30; propyli-
deneacetate, 17, 22: ruthenocyanide, 18, 986: sulphate, effect of
an excess of reagent in precipitation of, 18, 793: sulphate, pre-
cipitation of, 4, 212: sulphate, precipitation and purification of,
3, 37; titanate (abst.), 8, 178: trinitride, 20, 229

Barium group, analysis of (abst.), 12, 501
Barium and strontium, estimation of, in silicate analysis, 16, 83: occur-
rence of, in silicate rocks, 16, 81
Barley, proteids of, 17, 539: the steeping of (abst.), - 4, 143
Barley fat, composition of (abst.), 8, 274
Barley and malt, nitrogenous constituents of (abst.), 6, 173
Baryto-celestite, composition of, 13, 290
Base, a new (abst.), 1, 285; 2, 94: new, found in the animal body
(abst.), 7, 175
Bases, organic, certain additive reactions of, 18, 28: putrefaction, from
fish (abst.), 7, 175
Bast fibers, chemistry of (abst.), 4, 169
Baths, sulphurous, observations on (abst.), 1, 389
Battery, carbon, without metals (abst.), 9, 38: "Lalande-Spence"
Bauxite, analysis of, 18, 780: commercial analysis of, - 20, 209
Bearing-metal alloys, analysis of, 19, 934
Beef fat, microscopic detection of, in lard, 18, 189
Beer, analysis of, use of polariscope in (abst.), 1, 363: brewed without
hops, bitter principle of (abst.), 1, 363: detection of saccharin in
(abst.), 10, 88: detection of salicylic acid in (abst.), 1, 578: deter-
mination of organic nitrogen in (abst.), 4, 162
Beeswax, adulteration of (abst.), 1, 361: analysis and composition
of (abst.), 6, 170: method for investigation of (abst.), 1, 578:
non-acid components of (abst.), 8, 229
Beet root, analysis of, 3, 151
Beet root juice, fermentation of, during diffusion (abst.), 2, 91:
residues, nitriles produced in destructive distillation of (abst.), 1, 277
Beet roots, sugar, experiments with, P. 2, 56
D : 1 : 1 : (1 : )
Beet sugar, raw, reducing substance in (abst.), 10, 38
Beet sugars, vanillin in certain unrefined (abst.), 2, 368
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55 Benzaldehyde, action of acetyl chloride on, in the presence of zinc
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55 Benzaldehyde, action of acetyl chloride on, in the presence of zinc dust (abst.), 5, 133; action of nitrogen trioxide on, 12, 56; action
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55 Benzaldehyde, action of acetyl chloride on, in the presence of zinc dust (abst.), 5, 133: action of nitrogen trioxide on, 12, 56: action of, on xylidine, 8, 173: condensation products of, with malonic
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55 Benzaldehyde, action of acetyl chloride on, in the presence of zinc dust (abst.), 5, 133: action of nitrogen trioxide on, 12, 56: action of, on xylidine, 8, 173: condensation products of, with malonic and iso-succinic acids (abst.), 5, 237
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55 Benzaldehyde, action of acetyl chloride on, in the presence of zinc dust (abst.), 5, 133: action of nitrogen trioxide on, 12, 56: action of, on xylidine, 8, 173: condensation products of, with malonic and iso-succinic acids (abst.), 5, 237 Benzaldehyde, o-nitro-, and its behavior to nascent hydrogen (abst.),
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55 Benzaldehyde, action of acetyl chloride on, in the presence of zinc dust (abst.), 5, 133: action of nitrogen trioxide on, 12, 56: action of, on xylidine, 8, 173: condensation products of, with malonic and iso-succinic acids (abst.), 5, 237 Benzaldehyde, o-nitro-, and its behavior to nascent hydrogen (abst.), 2, 366: o-nitro-, preparation of (abst.), 6, 87: o-nitro-, prepara-
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55 Benzaldehyde, action of acetyl chloride on, in the presence of zinc dust (abst.), 5, 133: action of nitrogen trioxide on, 12, 56: action of, on xylidine, 8, 173: condensation products of, with malonic and iso-succinic acids (abst.), 5, 237 Benzaldehyde, o-nitro-, and its behavior to nascent hydrogen (abst.), 2, 366: o-nitro-, preparation of (abst.), 6, 87: o-nitro-, preparation of indigo-blue from (abst.), 5, 63: p-nitro and p-toluidine,
Beet sugars, vanillin in certain unrefined (abst.), 2, 368 Beginners in chemistry, quantitative work for, 16, 59 Belladonnine isomeric with atropine (abst.) 2, 173 Bellows for blow-pipe, P. 2, 29 Benzal acetoacetic ester, action of phenylhydrazine on (abst.), - 8, 55 Benzaldehyde, action of acetyl chloride on, in the presence of zinc dust (abst.), 5, 133: action of nitrogen trioxide on, 12, 56: action of, on xylidine, 8, 173: condensation products of, with malonic and iso-succinic acids (abst.), 5, 237 Benzaldehyde, o-nitro-, and its behavior to nascent hydrogen (abst.), 2, 366: o-nitro-, preparation of (abst.), 6, 87: o-nitro-, prepara-

	, 1	[44
Benzene, action of isobutyl chloride on, in the presence of aluminum		
chloride (abst.), 6, 191: action of chlorinated aldehydes on		
(abst.), 6, 165: action of ethyl chlorocarbonate on (abst.), 4, 143:		
action of, on ethylene in presence of aluminum chloride (abst.),		
1, 390: action of methylene chloride on (abst.), 6, 163: action of		
nitrogen trioxide on, 12, 9: action of oxygen, ozone, and nascent		
oxygen upon, 3, 16: commercial, presence of an isocyanide in		
(abst.), 7, 29: compounds of, with antimony trichloride (abst.),		
5, 60: constitution of (abst.), 4, 229: determination of, in illumi-		
nating gas, 16, 697: heat of combustion of (abst.), 4, 229: method		
of obtaining, from coal gas (abst.), 6, 175: mixture of, with acetic		
acid does not separate in layers, 17, 932: remarks on the action of		
vinyl bromide and tribromide on, in the presence of aluminum		
chloride (abst.), 6, 166: separation of, from crude tar, naphtha,		
and crude benzines (abst.), 6, 101: syntheses by action of metallic		
	,	397
Benzene derivatives, isomerisms of (abst.), 1, 233: hexachloride,	٠, .	)7/
action of water and silver hydroxide on 2, 205: theory, contribu-		
	,	234
Benzene, p-amidooctyl- (abst.), 7, 176: brom-, action of aluminum	, .	-34
chloride on (abst.), 4, 174: monobrom-, a second (abst.), 12, 352:		
nitro-, oxidation of phenol by means of (abst.), 7, 207; perchlor-,		
	4	175
Benzenes, diamido-, isomeric, action of sulphuric acid on (abst.), 2,	<b>†</b> )	175
	2,	0.5
Benzenesulphonate, ammonium, products of the dry distillation of	.,	95
		-40
		549 835
		186
	z, 3,	186
		75
	z, 5,	369 ••
		87
Benzil, action of aldehydes and ammonia on (abst.), 7, 31: on the con-	7,	59
	_	T 26
stitution of (abst.), 5 Benzoic acid, action of nitrogen trioxide on, 12, 56: curve of solubility	), .	126
	2,	88
Benzoic acid, amido-, derivatives of succinic, sebacic, and phthalic	٤,	00
acids (abst.), 7, 202: amido-, nitrogenized colloid derived from		
(abst.), 6, 134: dinitro- (abst.), 2, 369: hydroxy-, heat of neutrali-		
zation of (abst.), 8, 21: nitrosulpho-, and some derivatives (abst.),		0.0
	5,	20
Benzoic acids, dihydroxy-, and iodosalicylic acids (abst.), 5, 29, 59:	0	-
hydroxy-, heat of formation of (abst.), 8	8,	22

Benzoic anhydride, action of, on pyrrol (abst.), 7,	84
	222
Benzoin, action of amides upon, 18, 1	IOI
Benzonitrile, action of nitrogen trioxide on, 12,	55
Benzotrichloride, action of, on primary amines, 1, 524: combinations	
of, with aromatic bases (abst.), 4,	207
Benzoyl derivatives of aromatic amines (abst.), 7,	•
Renzovlacetic acid (abst.) 6	
Benzoylacetic acid, p-nitro (abst.), 7,	31
Benzoyldiphenylamine, action of phosphorus pentachloride on (abst.), 4,	
Benzureide, 6,	15
Benzyl bromide, $p$ -, $m$ -, and $o$ -brom-, (abst.), $r$ , 282: bromide, $p$ -chlor-	- 3
(abst.), 1, 282: bromide, p-iodo- (abst.), 1, 283: chloride, action	
of zinc powder on (abst.), 8, 181: chloride, o-nitro- (abst.), 7, 56:	
cyanide, nitro-, diazo derivatives of (abst.), 5, 96: derivatives	
(abst.), 9, 211: ethers of the brominated nitrophenols, and their	
	245
Benzylidene chloride, p-nitro- (abst.), 8,	
	121
	40
Benzylphenol and its derivatives (abst.), 4, 143, 1	
Benzyl-o-thioformate, crystallography of (abst.), 2,	
Berthelot's contributions to the history of chemistry (review), - 18,	400
D1	
Beryl, analyses of, 16,	
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separa-	65
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5,	65
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), - 5, Beryllium borate, P. 2,	65
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), - 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.	65 115 114
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, I,	65
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), - 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on	65 115 114 132
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, I, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), I,	65 115 114 132
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, I, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), I, Betain in cotton-seed cake (abst.), 7,	65 115 114 132 165 58
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, I, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), I, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), I,	65 115 114 132 165 58 157
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), 1, Beverages, carbonated, lead in, 11,	65 115 114 132 165 58
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, I, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), I, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), I, Beverages, carbonated, lead in, II, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in	65 115 114 132 165 58 157
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), 1, Beverages, carbonated, lead in, 11, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), 1,	65 115 114 132 165 58 157
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, I, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), I, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), I, Beverages, carbonated, lead in, II, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in	65 115 114 132 165 58 157 99
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, I, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), I, Betain in cotton-seed cake (abst.), I, Beverages, carbonated, lead in, II, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), I, Bile constituents in urine, determination of (abst.), I, Bile constituents in urine, determination of (abst.), I, Bindheimite, analysis of, I,	65 1115 1114 132 165 58 1157 99 105 414
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), 1, Beverages, carbonated, lead in, 1, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), 1, Bile constituents in urine, determination of (abst.), 12, Bindheimite, analysis of, 1, Biochemistry, importance of the study of, 16, 15	65 1115 1114 132 165 58 1157 99 105 414
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 1, Betulin (abst.), 1, Beverages, carbonated, lead in, 1, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), 1, Bile constituents in urine, determination of (abst.), 1, Bindheimite, analysis of, 1, Biochemistry, importance of the study of, 16, Bird's nest, edible, composition of (abst.),	65 1115 1114 132 165 58 1157 99 105 414
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), 1, Beverages, carbonated, lead in, 1, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), 1, Bile constituents in urine, determination of (abst.), 1, Bindheimite, analysis of, 1, Biochemistry, importance of the study of, 16, Bird's nest, edible, composition of (abst.), 12, 151: electrolysis of	65 1115 1114 1132 1165 58 1157 99 1105 4114 1134 261
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), 1, Beverages, carbonated, lead in, 1, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), 1, Bile constituents in urine, determination of (abst.), 1, Bindheimite, analysis of, 1, Biochemistry, importance of the study of, 16, Bird's nest, edible, composition of (abst.), 12, 151: electrolysis of pyrophosphate of (abst.), 12, 172: in lead in the manufacture of	65 1115 1114 1132 1165 58 1157 99 1105 4114 1134 261
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), 1, Beverages, carbonated, lead in, 1, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), 1, Bile constituents in urine, determination of (abst.), 1, Bindheimite, analysis of, 1, Biochemistry, importance of the study of, 16, Bird's nest, edible, composition of (abst.), 12, 151: electrolysis of	65 1115 1114 1132 1165 58 1157 99 1105 4114 1134 261
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), 1, Beverages, carbonated, lead in, 1, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), 1, Bile constituents in urine, determination of (abst.), 12, 2, 2, Bindheimite, analysis of, 1, Bismuth, atomic weight of, 17, 210: (abst.), 12, 151: electrolysis of pyrophosphate of (abst.), 12, 172: in lead in the manufacture of white lead, P. 1, 70: toxic character of (abst.), 10, 77: volumetric determination of, 2, 43; 4, 141,	65 1114 132 165 58 157 99 105 414 134 261 289
Beryllium, on (abst.), 12, 154: researches on (abst.), 12, 472: separation of, from iron, 17, 688: spectrum of, etc., (abst.), 5, Beryllium borate, P. 2, Beryllium: see also Glucinum.  Berzelius medal, report on the, 1, Bessemer ingot, composition of gases in, 2, 146: process, researches on (abst.), 1, Betain in cotton-seed cake (abst.), 7, Betulin (abst.), 1, Beverages, carbonated, lead in, 1, Bile, contributions to the chemistry of (abst.), 1, 493: detection of, in urine (abst.), 1, Bile constituents in urine, determination of (abst.), 1, Bindheimite, analysis of, 1, Biochemistry, importance of the study of, 1, Bismuth, atomic weight of, 17, 210: (abst.), 12, 151: electrolysis of pyrophosphate of (abst.), 12, 172: in lead in the manufacture of white lead, P. 1, 70: toxic character of (abst.), 10, 77: volumetric	65 1114 132 165 58 157 99 105 414 134 261 289

	alkyls and with vegetable bases, 20, 96: nitrate, basic, free from
	arsenic, preparation of (abst.), 2, 136: sulphide, solubility of, in
	alkaline sulphides, 18, 1091: sulphide, solubility of, in sodium
	sulphide, 18, 683
В	ismuth, separation of, from antimony, electrolytic, 15, 203, 204: from
_	arsenic, electrolytic, 15, 202, 204: from cadmium, electrolytic,
	15, 103: from cobalt, electrolytic, 15, 104, 105: from copper (abst.),
	5, 244: from copper, by hydrochloric acid gas, 18, 1036: from lead,
	by hydrobromic acid gas, 20, 802: from lead, by hydrochloric
	acid gas, 18, 1034: from lead, 18, 1055: from mercury, electrolytic,
	15, 28: from nickel, electrolytic, 15, 104, 105: from tin, electro-
	lytic, 15, 204: from zinc, electrolytic, 15, 104, 105
	itter principle in fermented liquors brewed without hops (abst.), - 1, 363
	ituminous rocks, commercial analysis of (abst.), - 2, 432
	last-furnaces, titanium in, 12, 91
В	last-furnace slags, calculation of, 12, 443: and the fusibility of sili-
	cates, 12, 189, 307
В	cates, 12, 189, 307 lasting gelatine, 15, 552
В	leaching agents, action of, on writing ink (abst.), 9, 224: powder, on
	the constitution of (abst.), 5, 237: powder, rate at which it loses
	chlorine (abst.), 10, 90
В	leaching and dyeing, on the chemistry of (abst.), 6, 197: of oils and
	grease, improvements in (abst.), 8, 43
В	lood, abnormal constituents of, due to leucocythemia, P. 1, 2, 29:
	coloring-matter of, action of hydrogen dioxide on (abst.), 4, 240:
	of a diabetic patient, levorotary $\beta$ -hydroxybutyric acid in (abst.),
	9, 113: process for the detection of (abst.), 10, 88: spectroscopic
	detection of (abst.), 10, 88: and urine, peptones in (abst.), - 8, 231
В	lowing machine (abst.), 1, 91
	lowpipe analysis, some extensions of the plaster-of-Paris method in,
~	18, 849: bellows, P. 2, 29: experiments upon silver chloride, bro-
	mide, and iodide, P. 2, 74: lamp, portable (abst.), 1, 91: lamp and
	candle, P. 2, 78: reactions with alloys of lead and tin, P. 2, 108:
	reactions for iodides, bromides, and chlorides, P. 2, 110: reagent,
ъ	new, 19, (24): reagent, silver iodide as a, 7, 132
	lowpipe, short pocket, P. 2, 103
	oiler feed water, purification of, 15, 610
	oiler scale, presence of oil in, 18, 741
	oilers, peculiar perforations of zinc rods in, 13, 286
В	oiling-points, determination of, with small quantities of substance
	(abst.), I, 376: etc., of esters of fatty acids (abst.), 8, 228: of
	esters and ethers of hydroxyacids (abst.), 1, 290; 2, 174: a func-
	tion of the chemical nature of compounds (abst.), 12, 234: relation
	of, to vapor densities, 17, 969: of solutions of salts (abst.), - 9, 109
F	Sone-black, absorption of sugar by, 1, 509: action of, on salts (abst.),
	I, 95: action of, on solutions of pure sugar, I, 468: decarboniza-
	tion of, 17, 503: rapid and accurate analysis of, 17, 51

Bone oil, notes on, 4, 153: purification of (abst.), - 6, 136
Bone phosphate, separation of, from rock phosphate, - 18, 491
Bone phosphate fodder, arsenic in (abst.), 11, 54
Books received, 17, 916, 997; 18, 100, 196, 310, 414, 474, 564, 660, 747,
848, 1027, 1112; 19, 92, 182, 274, 357, 513, 590, 681, 768, 844, 921,
956; 20, 79, 162, 241, 320, 392, 467, 553, 638, 730, 814, 897, 990
Borax, employment of, for preserving meat (abst.), 1, 173: volatility
of, 16,410
Bordeaux red, detection of, in wines (abst.), 4, 191
Boric acid, complex acid containing (abst.), 2, 434: determination of
(abst.), 9, 11: determination of, in borosilicates (abst.), 6, 239:
determination of, in foods, 19, 55, 387: determination of, volu-
metric (abst.), 10, 43; 20, 288: physiological effect of (abst.),
6, 158: as a preservative, 1, 477: separation of, from phosphoric
acid 19, 386: Turner's reaction for (abst.), 1, 528: volatility of, 19, 385
Boric acid works at Larderello, 16, 538
Borneol, action of carbon disulphide on (abst.), 12, 161: carbonic
ether of (abst.), 4, 76: synthesis of an inactive (abst.), - 8, 73
Borneol, ethyl- (abst.), 9, 114
Boron, analogy between, and C <sub>2</sub> H <sub>3</sub> (abst.), 6, 158: atomic weight of,
16, 179: determination of, in organic bodies (abst.), 1, 543: quin-
quivalence of (abst.), 2, 96
Borosilicates, estimation of boric acid in (abst.), 6, 239
Borotungstates (abst.), 2, 432  Botrytis bassiana and its crystalline products, 16, 860  Bottle for specimens
Bottle for specimens, 18, 412
Brandy, determination of fusel oil in (abst.), 5, 27, 50
Brasilin and haematoxylin (abst.), 7, 60
Brass, on the analysis of, 16, 133: and bronze, analysis of, 19, 934:
speed of dissociation of (abst.), 6, 75
Brazilein, new compounds of (abst.), 4, 260
Brazil nut, proteid of, 18, 621
Bread, detection of alum in (abst.), 4, 188: and flour, analysis of
(abst.), 1,566
British Association for the Advancement of Science, Toronto meeting, 19, 840
Bromacetone, action of, on ethyl aceto-acetate (abst.), 6, 85
Bromanil (tetrabromquinone), action of, on monamines, - 2, 109
Bromates, use of, in volumetric analysis (abst.), 7, 296
Bromchloral (abst.), 4, 269
Bromdichloracetic acid (abst.), 4, 269
Bromdiphenylmethane, action of ammonia on (abst.), 2, 436
Bromides, action of heat on, 5, 139: blowpipe reactions for, - P. 2, 110
Bromine, action of, on the amides (abst.), 5, 21: action of, on amines
in alkaline solution (abst.), 5, 129: action of, on carbon bisulphide
(abst.), 5, 26: action of, on quinoline and pyridine (abst.), 4, 242:
behavior of pyrotartaric acid with (abst.), 6, 308; behavior of
silver haloid salts towards (abst.), 5, 245: carbon compounds of,

obtained in its manufacture (abst.), 5, 93: new combination of carbon and sulphur with (abst.), 4, 226: expulsion of sulpho
group by (abst.), 4, 175: quantitative separation of, from chlorine (abst.), 7, 178: substitution of, for phenolic hydrogen (abst.),
7, 145: use of, for decomposing sulphides (abst.), 9, 35: vapor-
density of (abst.), 5, 26: vapor-density of, at yellow heat (abst.), 2, 371
Bromine vapor, precipitation of manganese by means of (abst.), - 5, 244
Bromine and chlorine, indirect determination of (abst.), - 4, 161
Bromine, chlorine, and iodine, estimation of, in the presence of one
another (abst.), 6, 49; 18, 688: separation and determination of
(abst.), 1, 384
Bromocaffeine, perhalides of, 18, 370
Bromochloroform (abst.), 4, 269
Bromodurene, action of sulphuric acid on (abst.), 9, 215 Bromoform, preparation of, by electrolysis (abst.), 7, 85
Bromopurpureo cobalt salts (abst.), 1, 295
Bronze and brass, analysis of, 19, 934
Bronze, phosphor-, analysis of, 19, 396: manufacture of, - 19, 393
Bronzes, on the analysis of, 16, 133  Brucine, on the constitution of (abst.), 5, 95: new reaction of, with
chromic acid (abst.), 1, 100: physiological action of (abst.), - 7, 116
Burette with automatic zero, 16, 145; 18, 1075: without graduations
(abst.), 9, 17: Mohr's, modification of, 3, 124: mounted, P. 1, 181:
portable, P. 1, 159
Burette clamp, 16, 719: filler, 16, 870: holder, 14, 15
Butter, adulterated, simple method for detecting (abst.), 8, 87: anal-
ysis of, by Koettstorfer's method (abst.), 1, 567: artificial, manu-
facture of, P. 1, 154: artificial, specific gravity of oil from (abst.),
4, 188: calorimeter used in detecting adulterations of, 18, 174:
detection of falsification in (abst.), 10, 87: detection of foreign
fats in (abst.), 1, 359, 567: determination of melting-point of,
15, 661: distinction of, from other fats (abst.), 1, 568: effect on,
of feeding cotton-seed foods, 13, 134: estimation of coloring-
matter in, 9, 41: examination of, 7, 134: examination of, by
polarized light (abst.), 1, 358: glucose in, 20, 201: influence of
food and animal idiosyncrasy on the composition of (abst.), 12, 16:
modification of Hehner's method of testing (abst.), 1, 86: rancid-
ity of (abst.), 8, 108: a sample of old, 9, 3: separation of coloring-
matters in, 9, 76, 98: studies on (abst.), 8, 107: test for adulteration in (abst.), 8, 40: testing of, by means of refractometer (abst.),
9, 14: viscosimetric examination of, 17, 719
Butter analysis (abst.), 11, 54: on Koettstorfer's method of (abst.),
r, 568; 6, 311: methods of (abst.), 8, 28: relation of cocoanut oil
to methods of, 7, 188
Butter fat (abst.), 12, 118: commercial, adulterations of (abst.),
1, 569: determination of volatile and insoluble fatty acids in,

16, 673: method for analysis of (abst.), 1, 568: and its substitutes,
examination of, 8, 155
Butter and its falsifications, a (conversazione), 8, 247
Butter and lard, detection of foreign fats in, 19, 796
Butter and milk, determination of solids and fat in (abst.), - 10, 27
Butter and tallow, determination of specific gravity of (abst.), - 8, 205
Butter and its substitutes (abst.), 8, 276
iso-Butaldehyde, action of potassium carbonate on (abst.), 1, 292: con-
densation products of, obtained by means of alcoholic potassium
hydroxide (abst.), 5, 94 Butyl chloracetate (abst.), 8, 180: iodide, allyl iodide, and zinc, action
of, on acetone (abst.), 7, 58: iodide, tertiary, action of, on isobutyl-
ene (abst.), 2, 54 iso-Butyl chloride, action of, on benzene in the presence of aluminum
· · · · · · · · · · · · · · · · · · ·
chloride (abst.), 6, 191
iso-Butyl-o-amidotoluenes, isomeric (abst.), 7, 88
iso-Butylbenzene, p-amido-, derivatives of (abst.), 10, 19
iso-Butylene, action of tertiary butyl iodide on (abst.), - 2, 54
iso-Butylenebromide, behavior of sodium phenylmercaptide with
(abst.), 12, 229
Butyrellite, composition of (abst.), 9, 6
Butyric acid, pure (abst.), 9, 6
Butyric acid, β-amido- and β-anilido- (abst.), 2, 367: β-hydroxy-,
levorotary, in the blood of a diabetic patient (abst.), 9, 113
Bynedestin, a globulin of malt, 18, 542
Bynin, a malt proteid, 18, 552
Cacodylic acid, physiological effects of (abst.), I, 160
Cactaceae, the chemistry of, 18, 624
Cadmium, atomic weight of, 18, 205; 19, 364: atomic weight of, elec-
trolytic determination of, 18, 1016: determination of, in presence
of copper (abst.), 4, 167: electrolysis of pyrophosphate of (abst.),
12, 171: electrolytic determination of, 19, (26), 379, 513, 870;
20, 280: (abst.), 1, 330, 331, 391
Cadmium, separation of, from antimony, electrolytic, 15, 200, 202:
from arsenic, electrolytic, 15, 201, 202: by hydrobromic acid gas,
20, 807: by hydrochloric acid gas, 18, 1039: from bismuth, elec-
trolytic, 15, 103: from cobalt, electrolytic (abst.), 12, 174: from
copper, electrolytic, 15, 102: (abst.), 8, 277: from iron, electro-
lytic (abst.), 12, 174: from manganese, electrolytic (abst.) 12, 174:
from nickel, electrolytic (abst.); 12, 174: from silver, electrolytic,
16, 424: from tin, electrolytic, 15, 201, 202: from zinc, electrolytic
(abst.), 7, 296: (abst.), 8, 277: electrolytic (abst.), 12, 174
Cadmium sulphide, determination of (abst.), 9, 35
Caffeic acid, 20, 42
Caffeine (abst.), 4, 174: action of Wagner's reagent upon, 18, 331:
determination of, 19, 279: new method for estimation of, 18, 338:
notes on the estimation of, 18, 978; transformation of xanthine
notes on the estimation of, 10, 978; transformation of xanthine

into (abst.), 4, 264
Caffeine compound in kola, 19, 63: perbromides, 18, 356: perhalides,
18, 347: periodide, 18, 350
18, 347: periodide, 18, 350 Caffeotannic acid, 20, 42
Calcite from York, Pa., 15, 543
Calcium, determination of, as carbonate after precipitation as oxalate,
P. 2, 126: determination of, by photometric method, 18, 661:
determination of, in the presence of excess of aluminum, phos-
phoric acid, etc. (abst.), 6, 169: dissociation of (abst.), - 2, 226
Calcium salts of, volatility, of, 19, 156: spectrum of (abst.),  - 1, 583
Calcium acetate, crude, determination of acetic acid in (abst.), 1, 367:
acetate, crude, valuation of (abst.), 1, 582: acetate, manufacture
and analysis of, 4, 94: acid tartrate, note on, 13, 144: bromide,
the hydration of, 16, 621: carbide, estimation of sulphides in,
18, 740: carbide, the manufacture of, 18, 311: carbide, properties
of, 17, 306: carbonate, precipitation of (abst.), 1, 334: chloride,
compound of, with normal propyl alcohol (abst.), 12, 156: chlo-
ride and sulphuric acid, relative values of, as desiccating agents
(abst.), 6, 98: ferrocyanide, use of organic bases in preparing,
17, 927: hydroxide as a precipitant of suspended clay, 13, 100;
iodide, the hydration of, 16, 621: orthophosphate, see Tricalcium
phosphate: oxide, action of, in expelling ammonia from salts and
amines (abst.), 6, 27: oxide, determination of, in quicklime,
16, 721: phosphate, action of sulphuric acid on (abst.), 2, 96:
phosphate, properties of (abst.), 2, 133: propylideneacetate,
17, 23: sulphate, hydrated, influence of temperature on the
composition of (abst.), 10, 78: sulphide with violet phosphores-
cence, preparation of (abst.), 8, 199: sulphite, stalactites and
stalagmites of, 17, 242: thiosulphate, origin of (abst.), 7, 28:
trinitride, 20, 228
Calculi, analyses of, 4, 215: intestinal, of horses, analyses of - 1, 430 California wines, some characteristics of, 16, 597
California wines, some characteristics of, 16, 597
Calorimeter, bomb (abst.), 7, 146: bomb, as a combustion furnace for
ultimate analysis (abst.), 10, 172: bomb, determination of the
thermal value of, 19, 439: for heats of combustion (abst.), 1, 586:
respiration, description of a new, 20, 681: Thompson's industrial
value of (abst.), 89
Calorimetric measurements (abst.), 10, 15: method, a (abst.), - 1, 295
Calycanthus glaucus, analysis of the seed of (abst.), - 12, 15
Camomile, Roman (Anthemis nobilis), anthemene from (abst.),
6, 191: oil of, organic acids obtained in the saponification of (abst.),
1, 238: oil of, the separate constituents of (abst.), - 1, 238
Camphanic acid, constitution of (abst.), 7, 82 Camphenol, active, and ethylborneol (abst.), 9, 114
Campholurethane (abst.), 4, 235
Campholurethane (abst.), 4, 235 Campholurethanes, two stereoisomeric (abst.), 6, 163
Camphonitrophenol, isomeric with nitrocamphor (abst.), - 12, 71
The production of the first the country of the coun

Camphor, Borneo: reclamation of priority (abst.), 1, 277: from Ledum
palustre (abst.), 6, 95: quantitative determination of (abst.), 12,
477: peppermint, and some of its derivatives (abst.), - 4, 142
Camphor chlorides (abst.), 2, 60: chloronitrated, isomerism of (abst.),
6, 131: dichloride (abst.), 4, 233: peroxide and barium campho-
rate (abst.), 6, 91
Camplior group, compounds of (abst.), 2, 179: motions and electricity,
connections between, P. 1, 2, 66: motions, note on, 7, 13: oil,
Japanese (abst.), 6, 313
Camphoric acid, note on (abst.), 12, 161: and its amide, action of de-
hydrating bodies upon (abst.), 1, 397; 2, 187
Candle material, determination of melting-point and composition of, 16, 825
Candle and lamp for blowpipe, P. 2, 78
Cane juice and raw sugar, occurrence of aconitic acid in, - P. I, 220
Cane sugar, action of acetic and hydrochloric acids on, 17, 320: detec-
tion of, in glucose 2, 111, 428: determination of glucose in, 1, 2:
determinations of mixtures of, with milk sugar (abst.), 7, 149:
determination of, in presence of glucose, 17, 312: exact deter-
mination of, by polariscope, 1, 2: refined, detection of anhydrous
glucose in, 5, 41
Canned food, occurrence of tin in, 13, 200
Canned goods, collecting and analyzing gases in, 19, 733
Capric acid, dibrom- (abst.), 1, 292
Caproic acid, normal, electrolysis of (abst.), 8, 272
Caprolactone (abst.), 4, 270; 6, 162
Caprolactonic acid, carboxy-, and allylsuccinic acid (abst.), - 5, 69
Carbamido-palladious chloride (abst.), 2, 137 Carbide of iron, chromium and molybdenum, 17, 799: of iron, chro-
Carbinol, allyldiethyl-, 2, 54: allyldipropyl-, 2, 54: diallyl-iso-propyl-, 2, 177
Carbohydrate, new crystallizable (abst.), 12, 352: fermentable (abst.), 10, 78
Carbohydrates, acetyl compounds of (abst.), 2, 225: with chromates,
behavior of, towards light (abst.), 1, 493; combustion of, by
means of chromic acid (abst.), 7, 293: estimation of, in starch
products, 19, 698: in food-stuffs, determination of, 19, 183, 347;
formation of fat from, in carnivora (abst.), 8, 86: heats of combus-
tion of, 20, 305: influence of, on the putrefaction of albumin
(abst.), 8, 230: physiology of, in the animal system (abst.), 6, 159,
233: of the sweet potato (abst.), 12, 351: of wheat, insoluble, - 19, 291
Carbolic acid. See Phenol.
Carbon, absorption of chlorine by (abst.), 7, 148: atomic weight of,

18, 212: atomic weight of, a correction, 20, 163: atomic weight of, by combustion of diamond (abst.), 4, 237: behavior of, toward iron at high temperatures (abst.), 8, 72: new combination of, with sulphur and bromine (abst.), 4, 226: and its compounds, chemical action with (abst.), 6, 286: on the condition in which it exists in steel (abst.), 5, 114: gravimetric determination of minute quantities of (abst.), 1, 108: electrolysis of, in ammonia (abst.), 8, 178: in gases evolved by the solution of iron in acids (abst.), 10, 25: an impurity in hydrogen affecting determinations of atomic weight, 12, 276: new mixture for separating, from iron and steel (abst.), 10, 156: pure, for electric light (abst.), 4, 235: the segregation of, in a piece of boiler plate,	, 614
Carbon compounds, brominated (abst.), 5, 93: heats of solution of, 18, 146; measuring heat of combustion of (abst.), 7, 146: relation	, 144
Carbon, determination of, in aluminum, 18, 771: in cast iron, 5, 56: (abst.), 1, 88; 6, 193: in iron (abst.), 10, 155: in iron, influence of sulphur on Eggertz' method for (abst.), 10, 115: in pig iron, 18, 1087: in iron and steel, 15, 213; 19, 95: (abst.), 4, 165; 12, 352: in iron and steel, colorimetric (abst.), 1, 371: in iron and steel, gas volumetric (abst.), 10, 68: in iron and steel, standard method for, 15, 526: (combined), in iron and steel, P. 2, 72: in steel, 15, 113, 283; 18, 223: in steel, by combustion in current of air, 15, 114: in steel, by combustion in the wet way, 20, 243:	
Carbon, determination of, organic, sources of error in, 20, 510, 528: in volatile compounds (abst.), 9, 220: in the wet way (abst.), 12, 477:	, 271
	, 162
Carbon, determinations of, in standard samples of iron and steel, Carbon dioxide, apparatus for preparing (abst.), 9, 175: in atmosphere, normal amount of (abst.), 4, 232: density of, 20, 170: detection of minute quantities of (abst.), 9, 199: hydrate of (abst.) 5, 64: liquid, under regulated pressure (abst.), 6, 25: as a measure of the efficiency of ventilation, 15, 572: occurrence of, in cavities of topaz, 3, 41: reactions of (abst.), 7, 286: reduction of, by phos- phorus at ordinary temperatures, 1, 230: reduction of, by phos- phorus at ordinary temperatures, correction, 1, 452: solid (abst.),	i, 45°
	3, 26
in water, by titration, 13 Carbon disulphide (abst.), 4, 252: action of bromine on (abst.), 5, 26:	, 98
action of, on menthol and borneol (abst.), 12, 161: action of, on p-nitraniline (abst.), 4, 264: action of phosphonium iodide on	

Ca

Ca

Ca

Ca

(abst.), 2, 171: action of, on silicon (abst.), 4, 240: detection of,		
in coal gas, 3, 38: some reactions of (abst.), 7, 286: vapor of,		
absorbents for (abst.),	7,	286
	13,	143
Carbon monoxide, action of, on alkaline hydroxides at high tempera-		.0
tures (abst.), 2, 367: behavior of, with air and moist phosphorus		
(abst.), 6, 75: comparison of rapid methods for determining,		
18, 866: constitution of (abst.), 18, 286: conversion of, into car-		
bon dioxide by nascent oxygen, 5, 78: determination of, by ex-		
plosion in technical gas analysis, 20, 343: heat of combination of		
(abst.), 1, 279: and hydrogen, relative affinity of oxygen for		
(abst.), 1, 164: limits to detection of (abst.), 1, 556: oxidation of,		
by air over phosphorus at ordinary temperatures, 1, 232: poison-		
ing by, 10, 176: preparation of (abst.),	5,	64
Carbon oxydichloride. See Carbonyl chloride.	٥,	04
Carbon oxysulphide, transformation of, into urea and thiourea (abst.),	4	226
Carbon and silicon, new compounds of (abst.),		237
Carbonate, determination of caustic alkali in presence of (abst.),		165
		_
Carbonates, crystallized, methods for preparation of (abst.), 9, 33: in	10,	77
		0.7
living plants (abst.),	8,	21
	II,	99
Carbonic acid, hydrated, composition of (abst.), 4, 236: in water and		
	10,	71
Carbonyl chloride, action of, on o-diamines (abst.), 12, 228: action of,		
on diazo-amido compounds (abst.), 4, 175: action of, on glycol-		
chlorhydrin (abst.),		144
		411
Carbostyril (abst.),		230
Carbotriphenyltriamine, constitution and synthesis of (abst.),		166
Carboxycaprolactonic acid and allylsuccinic acid (abst.),	5,	69
Carboxylic acids, occurrence of, in coal tar (abst.),	-	249
Carminaphte (of Laurent), method of preparing (abst.),		272
Carotin (abst.),		204
Carvacrol, occurrence of, in the essential oil of Satureia hortensis	•	
(abst.),	5,	24
		534
Casein, determination of, by precipitation with sulphuric acid (abst.),		
8, 61: determination of, study of methods for, 15, 635: sulphur in		
(abst.),	8,	60
Casein and fat, determination of, in feces, 19, 877: 20, 101: determina-		
	20,	765
	15,	78
		621
Castor oil, presence of a pimelic acid in the oxidation products of		
(abst.), 8, 110: solid residue from the distillation of, in vacuo,	5,	4
Cattle foods, recent progress in analysis of,	16,	174

Celestine, reproduction of, by wet process (abst.), 10, 113 Cells, living, reducing properties of (abst.), 4, 176 Cell-contents of certain plants, researches on (abst.), - 10, 101 Cellulose, action of solutions of, on polarized light (abst.), 6, 93: determination of, 19, 304: formula of (abst.), 2, 173: oxidation of
(abst.), 5, 92; 6, 197: separation of, from wheat, - 19, 296  Cement, conversion of lime mud into (abst.), 10, 91: decomposition of, by water (abst.), 6, 174: chemical and physical examination of,
15, 181; 16, 161, 283, 323, 374: detection of adulterations in (abst.), 6, 290
Cereals, determination of crude fiber in, 19, (39)
Ceresine and ozokerite from Galicia, P. 1, 121
Ceria, separation from other earths, 16, 650
Cerite metals, on (abst.), 5, 113
Cerium, atomic weight of, 18, 210; 20, 167: (abst.), 6, 306: contribu-
tions to the chemistry of, 16, 649: separation of, from iron, - 20, 846
Cerium compounds, contributions to chemistry of (abst.), 4, 203:
group, specific gravities and atomic volumes, etc. (abst.), 1, 295:
metals, contributions to chemistry of (abst.), 4, 176
Cerium acid sulphate (abst.), 12, 70 Cesium, atomic weight of (abst.), 1, 106
Cesium fluoride, 18, 57: columbium fluoride, 18, 59: barium ferrocyanide, 20, 33: barium ruthenocyanide, 20, 31: bromoselenate,
20, 571: ruthenium nitrosochloride, 16, 395: tantalum fluoride,
18, 59: titanium fluoride, 18, 60: trinitride, 20, 227
Cevadine, chemistry of (abst.), 1, 553
Champagne wines, clarification of (abst.), 4, 234
Charcoal, animal, absorption of sugar by, 1, 509: animal, decomposi-
tion of salt solutions by (abst.), 1, 95: preparation of, for the
manufacture of gunpowder (abst.), 9, 190
Charcoal borers P. 2, 104
Chart, alchemical, 13, 293
Cheese, composition of, P. 1, 2, 63: composition of American cheddar, 15, 605
Chemical analysis, treatment of precipitates in (abst.), 2, 43: com-
pounds, a few physical properties of (abst.), 6, 43: dynamics, ex-
planation of Gladstone and Tribe's law in (abst.), 7, 26: energy,
15, 421: force, relative intensity of, 12, 292: industry of United
States, 15, 563: problems of to-day (address by Victor Meyer),
11, 101: science, immediate work in, 14, 190: societies, early
American, 19, 717: studies, application of graphic methods in,
14, 128: terms, spelling and pronunciation of, 14, 63: theory,
foundations of, 5, 430
Chemical Congress. See Congress of Chemists.
Chemical literature, international index to, 15, 574: report of com-
mittee on, 15, 309: report of committee on indexing, 11, 121;
Chemical nature of compounds heiling points a function of (chat) vs. 224
Chemical nature of compounds, boiling-points a function of (abst.), 12, 234

Chemist, the American (presidential address), 14, 331
Chemists, industrial, education of, 15, 481, 627
Chemistry, experimental, in eighteenth century (notice), 13, 262: in-
dustrial, progress in (review), 19, 894: quantitative work for be-
ginners in, 16, 59: teaching of, 15, 463
Chemistry and physics, borderland between (presidential address).
13, 11: connection between (abst.), 8, 178 Chevallot's process for water-proofing (abst.), 9, 17 Chicago Section, meetings of, 17, (49), (68)
Chevallot's process for water-proofing (abst.), 9, 17
Chicago Section, meetings of, 17, (49), (68)
Chicken cholera, 2, 214: and virulent diseases (abst.), - 2, 79
Chicle, notes upon, 1, 50
Chinese liquor, analysis of a (abst.), 7, 243
Chloracetone, action of, on ethyl acetoacetate (abst.), 6, 85
Chloral, action of chlorine on (abst.), 8, 36 Chloral hydrate (abst.), 1, 401: answer to Berthelot's remarks on
(abst.), 1, 403: combination of hydrogen phosphide with (abst.),
8, 199: electrolysis of (abst.), 8, 20: heat of solution of, in water,
alcohol, chloroform, and toluene, 18, 156: remarks on paper of
Wurtz on (abst.), 1, 402
Chlorates, estimation of, by the zinc copper couple (abst.), - 10, 26
Chlorethyl bisulphide, constitution of (abst.), 4, 269
Chlorethyl bisulphide, constitution of (abst.), 10, 15
Chlorhydrin, propylene- (abst.), 7, 118
Chlorhydrins, aliphatic, action of thiocyanates on, 20, 668
Chloric and nitric acids, color reactions of, with certain aromatic
bodies, 19, 156
Chlordibromacetic acid (abst.), 4, 269
Chlorides, action of heat on, 5, 144: blowpipe reactions for, P. 2, 110:
comparative antiseptic value of (abst.), 9, 190: double, molecular
volume of (abst.), 6, 232: test for, in the presence of bromides
and iodides (abst.), 7, 209: variations of solubility of some, in the
presence of hydrochloric acid (abst.), 8, 163 Chlorinated derivatives of ethyl acetate (abst.), 10, 17
Chlorinated derivatives of ethyl acetate (abst.), 10, 17
Chlorine, absorption of, by carbon and its combination with hydrogen
(abst.), 7, 148: action of, on anhydrous chloral (abst.), 8, 36:
action of, on certain metals (abst.), 5, 99: action of, on organic
compounds containing sulphur (abst.), 6, 133: action of, on
phloroglucinol (abst.), 12, 159: action of, on the sulphides of alco-
holic radicals (abst.), 10, 16: action of, on sulphonic compounds
(abst.), 4, 263: apparatus for preparing (abst.), 12, 155: behavior
of hydrogen dioxide towards (abst.), 2, 60: contributions to
knowledge of (abst.), 2, 371: decomposition of aqueous solutions
of, in sunlight (abst.), 7, 120: density of, answer to Seelheim's
remarks on, 1, 481: density of, at high temperatures, note
on, 1, 453: derivatives of the aliphatic series (abst.), 10, 16: de-
tection of free, in hydrochloric acid (abst.), 12, 73: dissociation of
(abst.), 1, 310: and hydrochloric acid, influence of the ammonia

soda process on the value of (abst.), 6, 174: the Le Sueur process
for production of, 20, 868: loss of, from bleaching-powder (abst.),
10, 90: manufacture of, from magnesium chloride (abst.), 9, 224;
10, 85: presence of, in scapolites (abst.), 1, 391: acetate, non-exis-
tence of (abst.), I, 161: monoxide (abst.), 7, 244
Chlorine, determination of, in gases from chemical works (free and
combined) (abst.), 4, 161: gravimetric (abst.), 4, 161: in hydro-
chloric acid (free), 1, 18: (abst.) P 2, 149: indirect (abst.),
4, 161: in presence of bromine and iodine, 18, 688; (abst.), 1, 384;
2, 368; 6, 49: volumetric (abst.), 7, 209: in water, - P. 2, 3; 16, 71
Chlorine, separation of, from bromine (abst.), 7, 178: from iodine, in
the dry way (abst.), 7, 32
Chlorlactic acid, formation of, from glyceric acid (abst.), - 1, 289
Chlormalonic acid and derivatives (abst.), 4, 270
Chlornaphthol and dichlornaphthalene from β-naphtholsulphonic acid
(abst.), 4, 229
Chlorobromoform (abst.), 4, 269
Chlorocaffeine, perhalides of, 18, 364
Chloroform from acetone made from acetic acid, 18, 231: and acetone,
acid obtained by action of alcoholic potassium hydroxide on
(abst.), 9, 102: action of, on $\beta$ -naphthol (abst.), 4, 241: action of
quinoline on (abst.), 5, 66: detection of alcohol in (abst.), 1, 582:
preparation of, by electrolysis (abst.), 7, 85
Chloronitrides of phosphorus, 19, (43)
Chlorophyll (abst.), 2, 90; 7, 141: new coloring-matter from (abst.),
6, 133: preparation of pure (abst.), 6, 89: probable constitution
of (abst.), 6, 238: spectroscopic study of (abst.), - 4, 257
Chlorostanuates of rare earths (abst.), I, 278
Chlorosulphonic acid, behavior of, with non-metals and with tin
(abst.), 4, 261: preparation of (abst.), 5, 126
Chocolate and cocoa, determination of theobronine in (abst.), - 1, 365
Cholera, formation of ptomaines in (abst.), 7, 80
Cholesterin, contributions to our knowledge of (abst.), 1, 394
iso-Cholesterin, specific rotation of (abst.), 1, 380, 395
Cholic acid, empirical formula of (abst.), 10, 37
iso-Cholic acid (abst.), 5, 21
Chondrin, on the chemistry of (abst.), 1, 397
Chromammonium compounds, contributions to the chemistry of (abst.), 2, 290
Chromates, alkaline, titration of (abst.), 4, 165: and dichromates
(abst.), 1, 294; influence of, on give in the light (abst.), 1, 493;
(abst.), 1, 294: influence of, on glue in the light (abst.), 1, 493:
normal, detection of, in dichromates (abst.), 1, 89
normal, detection of, in dichromates (abst.), 1, 89 Chrome alums, accommodation of (abst.), 2, 370: 1701, analysis of
normal, detection of, in dichromates (abst.), 1, 89 Chrome alums, accommodation of (abst.), 2, 370: 101, 117: iron ore, disintegration of (abst.), 1, 104: ores,
normal, detection of, in dichromates (abst.), 1, 89 Chrome alums, accommodation of (abst.), 2, 370: 1101, 117: iron ore, disintegration of (abst.), 1, 104: ores, determination of chromium in, 17, 327: ores, disintegration and
normal, detection of, in dichromates (abst.), 1, 89 Chrome alums, accommodation of (abst.), 2, 370: 100, analysis of (abst.), 12, 117: iron ore, disintegration of (abst.), 1, 104: ores, determination of chromium in, 17, 327: ores, disintegration and solution of (abst.), 1, 558
normal, detection of, in dichromates (abst.), 1, 89 Chrome alums, accommodation of (abst.), 2, 370: 1101, 117: iron ore, disintegration of (abst.), 1, 104: ores, determination of chromium in, 17, 327: ores, disintegration and

Citrate solution, preparation of a neutral, 20, 585
Citrene, action of formic acid on (abst.), 10, 113
Citric acid, detection of (abst.), 7, 180: and its homologues (abst.),
1, 173: in lemon juice (abst.), 10, 195: occurrence of, in seeds of
leguminous plants (abst.), 7, 30: in sorghum juice, 15, 144: sur-
face-tension of solutions of, 20, 129
Citric and tartaric acids, on (abst.), 5, 231
Clamp for burette, 16, 719: universal, 17, 611
Clausius-Williamson hypothesis, validity of (abst.), - 6, 73
Clay, analysis of (abst.), 9, 35: suspended, precipitation of, by alumi-
num, ferric, or calcium hydroxides, 13, 100
num, ferric, or calcium hydroxides, 13, 100 Coagulation of colloid solutions, on the speed of, - 20, 375
Coal, analysis of (abst.), 6, 128: analysis of, preliminary report of
committee on, 20, 281
Coal, behavior of nitrogen in, during destructive distillation (abst.),
5, 95: coking of, in the Simon-Carvés ovens, by-products in (abst.),
7, 212: determination of nitrogen in (abst.), 5, 95: determination
of sulphur in, P. 1, 97: determination of sulphur in, study of
methods for, 20, 630: distillation of (abst.), 10, 45: distillation of,
and recovery of hydrocarbons from the gas (abst.), 6, 27
Coal gas, estimation of hydrogen sulphide in, by weight, 4, 177: pro-
cess for desulphurizing (abst.), 9, 223
Coals, analysis of different varieties of (abst.), 9, 198: determination
of heating effects of, 17, 843
Coal tar. See Tar.
Coal tar colors, effect of, on digestion, 18, 1092
Cobalt, alloys of, with copper (abst.), 7, 285: atomic weight of, 16, 183;
17, 207; 18, 202; 20, 166: decomposition of (abst.), 10, 180: deter-
mination of, by precipitation as oxalate (abst.), 1, 327: determina-
tion of, volumetric, .20, 173: electrolysis of pyrophosphate of
(abst.), 12, 169: test for (abst.), 1, 109
Cobalt amalgam (abst.), 1, 276: chloride, difference in color of hy-
drates of (abst.), 6, 307: nitrate as an indicator for ferrocyanide, 17, 474
Cobalt salts, bromopurpureo- (abst.), 1, 295
Cobalt, separation of, from aluminum, as oxalate (abst.), 1, 529: from
arsenic, by hydrobromic acid gas, 20, 808: from arsenic by hydro-
chloric acid gas, 18, 1042: from bismuth, electrolytic, 15, 104:
from iron, as oxalate (abst.), 1, 529; from nickel (abst.), 4, 166:
7, 250: from zinc (abst.), 8, 277; 9, 9
Cobaltocyanides, preparation of (abst.), 1, 272
Cobaltous chloride, compounds of, with aniline, etc. (abst.), - 1, 165
Cocaine, discovery of (abst.), 7, 88: presence of isocinnamic acid in
the alkaloids accompanying (abst.), 12, 161
d-Cocaine (abst.), 12, 164
Cochineal, fat in (abst.), 8, 66
Cocoa and chocolate, determination of theobromine in (abst.), - 1, 365
Cocoanut, the proteids of, 18, 621

Cocoanut oil, relation of, to methods of butter analysis, 7, 188
Cod liver oil and vegetable oils, examination of (abst.), - 10, 70
Coffee decoctions, solubility of arsenious oxide in, - P. 1, 2, 56
Coffee, roasted, examination of (abst.), 4, 189
Cohesion, nature and chemical signification of (abst.), 2, 57
Coke, determination of nitrogen in (abst.), 5, 95: determination of
sulphur in (abst.), 10, 155: from petroleum, substances contained
in (abst.), 2, 435
Coking coal in the Simon-Carvés ovens, by-products in (abst.), - 7, 212
Colchicine, detection of, in toxicological cases (abst.), - 1, 106
Colloid solutions, speed of coagulation in, 20, 375
Colophony, methyl alcohol from the dry distillation of (abst.), 5, 123:
4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
products of distillation of (abst.), 4, 233 Color, estimation of, by photography (abst.), 10, 86: estimation of, in
potable water, 18, 484: estimation of, in water, P. 2, 8: gray,
production of, on fibre by oxidation of aromatic amines and di-
amines (abst.), 8, 231
Color and color changes, some regularities of, - P. 1, 128
Colors, artificial, progress in manufacture and use of 15, 456: azo-,
spectra of, 6, 117, 149: from coal tar, influence of, on digestion,
18, 1092: indigo, examination of (abst.), 9, 120: of natural water,
measurement of, 18, 264: purple, derived from gold (abst.), - 7, 76
Coloration of coal fire by common salt (abst.), 10, 179
Color comparer for estimation of combined carbon in iron and steel, P. 2, 72
Colorimeter (abst.), 1, 91: for water analysis (abst.), 4, 163
Colorimetric test for copper, improvements in, 19, 24
Colorimetry, source of error in (abst.), 1, 379
Coloring matter from benzylmethylaniline, 7, 40: derived from chloro-
phyll (abst.), 6, 133: estimation of, in butter and its substitutes,
g, 41: of natural waters, 18, 68: of Palmella cruenta (abst.),
1, 403: of Persian berries (abst.), 2, 62: of Sophora japonica, etc.,
4, 206: in yolk of eggs (abst.), 12, 165
Coloring matters from action of diazo-compounds on phenols, 2, 236:
from aromatic nitro substitution products, etc. (abst.), 4, 205:
in butter, etc., method of separating, 9, 76, 98: in butter, reactions
of, 9, 98: red, determination of, in wines (abst.), 4, 191
Columbian Exposition, chemical notes from 15, 250, 312
Columbium, derivatives of, 18, 38: qualitative reactions of, 18, 50:
separation of, from tantalum, 18, 48
Columbium oxide, action of carbon tetrachloride on, 18, 532: action of
phosphorus pentachloride on, 18, 61
Columbus Section, meetings of, 20, (17), (47)
Combustion, complete, of bodies combustible with difficulty (abst.),
4, 269: of gunpowder, researches upon (abst.), 1, 399: luminous
incomplete, of ether (abst.), 4, 259: under high pressure (abst.), 12, 349
Combustion furnace, tiles for (abst.), 10, 68: use of calorimetric bomb
for, in ultimate analysis (abst.), 10, 172
101, in diciniate analysis (abst.), 10, 1/2

Compound salts, crystallization from saturated solutions of (abst.), 4, 261
Compressibility of gases, researches on (abst.), I, 172
Compression of solids (abst.), 6, 38, 190: of solids, sulphides formed
by (abst.), 6, 190
Concretions, intestinal, of horses, analysis of, 1, 430
Condensation of nitric acid, 17, 576
Condensations, on (physical and chemical), 13, 122
Condensed milk. See Milk.
Condenser for low boiling liquids, 19, 398: for extraction apparatus,
20, 965: modified Liebig's (abst.), 5, 97: for water analysis - 16, 871
Condenser attachment, new, 10, 63 Condensers, use of aluminum for, 19, 153
Conductivity measurements, reliability of dissociation values deter-
mined by, 20, 517 Conflagrations, prevention and extinguishing, - 17, 137, 251, 361
Conglutin and vitellin, 18, 609
Congress of Applied Chemistry, Second International, 18, 307, 660, 923:
Third International, 20, 137, 234, 466, 550
Congress, Chemical Midwinter Fair, at San Francisco, - 16, 645
Congress of Chemists, World's, address of welcome, 15, 301: an-
nouncements of committee on, 15, 43, 106, 177, 240: closing ad-
dress before, 16, 867: proceedings of, 15, 305
Congress, National Pure Food and Drug, 20, (35)
Congresses, International Chemical (note), 16, 880
Conhydrine, on the chemistry of (abst.), 5, 53
Constitution of American Chemical Society, 12, 184; 20, (51)
Copper, alloys of, with cobalt (abst.), 7, 285: analysis of, experiments
on, 16, 133: analysis of, method for, 16, 66: analysis of refined,
16, 785: assay of, in the wet way, 17, 346: assay of, by iodide
method, 18, 458: commercial, examination of (abst.), 4, 167: bar,
rational mode of sampling, 19, 245: delicate test for, 1, 525: deter-
mination of arsenic in metallic, 4, 167: determination of sulphur
in refined, 17, 814: distribution of precious metals and impurities
in, 19, 243: electrolysis of pyrophosphate of (abst.), 12, 171:
native, identification and quantitative estimation of arsenic, sul-
phur, phosphorus, etc., in (abst.), 6, 241: normally present in
wheat (abst.), 4, 188: reaction of, with sulphuric acid, 17, 904;
18, 251, 942: reagent for (abst.), 1, 528
Copper, reduction, determination of, 19, 305: refining, composition of
tank residues in, 19, 778
Copper, phosphor-, analysis of, 19, 396
Copper ammonium compounds, manufacture of (abst.), 6, 139: am-
monium oxyferrocyanide (abst.), 1, 388: arsenate, basic (abst.),
8, 164: oxychloride as a paint (abst.), 6, 291: potassium car-
bonate solution for determination of sugars (abst.), 12, 226: sul-
phate, solubility of, in the presence of ammonium sulphate
(abst.) 8. 24: sulphide colloidal (abst.) 0. 110: sulphide pre-

cipitated, composition of (abst.), 1, 332: sulphites, isomery of
(abst.), 4, 141
Copper, determination of, P. 2, 140; actual accuracy of, 18, 814: in
aluminum, 18, 768: colorimetric, improvements in, 19, 24: as
oxide, 2, 146: by titration with thiocyanate (abst.), 1, 323: volu-
metric method for, 4, 35; 19, 940; 20, 610
Copper separation of, from antimony, electrolytic, 15, 32, 198: from
antimony, by hydrobromic acid gas, 20, 804: from antimony, by
hydrochloric acid gas, 18, 1038: from arsenic, by hydrobromic
acid gas, 20, 805: from arsenic, by hydrochloric acid gas, 18, 1038:
from bismuth, by hydrochloric acid gas, 18, 1036: from bismuth
(abst.), 5, 244: from cadmium, electrolytic, 15, 102: from cobalt,
electrolytic, 15, 103: from cobalt (abst.), 8, 277; from iron, elec-
trolytic, 15, 103: from manganese (abst.), 8, 277: from mercury,
electrolytic, 16, 423: from nickel, electrolytic, 15, 103: as oxalate
(abst.), 1, 531: from silver, electrolytic, 16, 420: from tin, elec-
trolytic, 15, 197, 198: from zinc, electrolytic, 15, 103
Copper and arsenic left on sprayed fruit, 16, 71
Copper and nitrogen, double iodide of (abst.), 6, 34
Copper-zinc couple, action of, on nitric oxide (abst.), 5, 233: estima-
tion of chlorates by (abst.), 10, 26
Corallin, detection of, in wine (abst.), 1,576
Corn, examination of Eastern, Western, and Southern, 2, 7: the oil of
20, 948: studies on, at different stages of vegetation (abst.), 5, 120:
see also Maize.
Corylin, a proteid of the walnut and filbert, 18, 617
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86:
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27),
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27), (29), (37), (43), (45), (67); 18, (35), (57), (65), (71), (97), (119),
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27), (29), (37), (43), (45), (67); 18, (35), (57), (65), (71), (97), (119), (123); 19, (8), (15), (19), (21), (27), (33), (41), (55); 20, (1),
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27), (29), (37), (43), (45), (67); 18, (35), (57), (65), (71), (97), (119), (123); 19, (8), (15), (19), (21), (27), (33), (41), (55); 20, (1), (16), (19), (27), (43), (60), (69), (75), (85), (91), (99), (103)
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27), (29), (37), (43), (45), (67); 18, (35), (57), (65), (71), (97), (119), (123); 19, (8), (15), (19), (21), (27), (33), (41), (55); 20, (1), (16), (19), (27), (43), (60), (69), (75), (85), (91), (99), (103) Counter for bacteria, a new,
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27), (29), (37), (43), (45), (67); 18, (35), (57), (65), (71), (97), (119), (123); 19, (8), (15), (19), (21), (27), (33), (41), (55); 20, (1), (16), (19), (27), (43), (60), (69), (75), (85), (91), (99), (103) Counter for bacteria, a new, 20, 507 Cow-pea, proteids of,
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27), (29), (37), (43), (45), (67); 18, (35), (57), (65), (71), (97), (119), (123); 19, (8), (15), (19), (21), (27), (33), (41), (55); 20, (1), (16), (19), (27), (43), (60), (69), (75), (85), (91), (99), (103) Counter for bacteria, a new, 20, 507 Cow-pea, proteids of, 19, 494 Cream, proteids of,
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27), (29), (37), (43), (45), (67); 18, (35), (57), (65), (71), (97), (119), (123); 19, (8), (15), (19), (21), (27), (33), (41), (55); 20, (1), (16), (19), (27), (43), (60), (69), (75), (85), (91), (99), (103) Counter for bacteria, a new, 20, 507 Cow-pea, proteids of, 20, 858 Cream of tartar substitutes, their chemistry and analysis, - 16, 333
Corylin, a proteid of the walnut and filbert, 18, 617 Cotton for manufacture of gun-cotton, inspection of, 17, 783 Cotton, silk, and wool, absorption of weak reagents by (abst.), - 5, 98 Cotton goods, bleaching, etc., of (abst.), 6, 142: printed, microscopic examination of (abst.), 5, 125 Cotton-seed, analyses of, 6, 216: cake, betain in (abst.), 7, 58: cake and meal, digestibility of (abst.), 8, 60: foods, effect on butter from feeding, 13, 134: melitose in (abst.), 7, 30: proteids of, - 16, 778 Cotton-seed oil (abst.), 8, 206: an adulterant of tallow (abst.), 10, 86: detection of, in lard (abst.), 10, 115: distinction of, from olive oil (abst.), 4, 192: test for, in lard (abst.), 10, 182 Council, minutes of meetings of, 16, (1), (13), (15); 17, (21), (27), (29), (37), (43), (45), (67); 18, (35), (57), (65), (71), (97), (119), (123); 19, (8), (15), (19), (21), (27), (33), (41), (55); 20, (1), (16), (19), (27), (43), (60), (69), (75), (85), (91), (99), (103) Counter for bacteria, a new, 20, 507 Cow-pea, proteids of, 19, 494 Cream, proteids of,

o-Cresol, phthalein of (abst.), r,	395
Cresols, azo- and disazo- compounds of (abst.), 7,	54
	38
	264
Crotonic acid, decomposition of halogen substitution products of, by	
	206
	396
Crucible, Gooch, use of, as a silver voltameter, 12, 300: improved	
	105
Crucibles, graphite, manufacture of, 6, 283; 7, 4: porcelain, on num-	Ü
	99
	, 67
	199
Crystallization, fractional, 2, 408: from saturated solutions of certain	- ))
compound salts (abst.), 4, 261: water of, specific volume of,	
	350
	370
	-
	236 162
	95
, , , , , , , , , , , , , , , , , , , ,	266
Cumic aldehyde, synthesis of thymol from (abst.), 4, 205: nitro-, and	
	164
	51
Cuminol. See Cumic aldehyde.	0
	338
	247
Cupric ammonium oxyferrocyanide (abst.), 1, 388: ammonium com-	
pounds, manufacture and use of (abst.), 6, 139: ammonium sul-	
phate, basic (abst.), 5, 231: compounds, determination of cuprous	
compounds, in presence of (abst.), 4, 167: salts, reduction of, by	
sugars (abst.), 10, 189: sulphide, composition of (abst.), - 1,	332
Cupro-manganese, note on, I,	43
Cuprous chloride, heat of formation of (abst.), 2, 171: compounds,	
determination of, in presence of cupric (abst.), 4, 167: sulphites,	
	241
	263
	221
	207
	267
Cyanates, aromatic, a few reaction of (abst.), 8, 55: ethereal (abst.), 4,	
	497
	-
	1.70
Cyanide, silver, identification of minute quantities of (abst.) - 5.	176 245
	245
Cyanides, manufacture of, 15, 569: and ferrocyanides, manufacture	

the toluidines (abst.), 6, 38: direct combination of, with hydrogen
and the metals (abst.), 1, 398; 2, 92: and its derivatives, history
of manufacture of, 11, 3, 31: determination of, by silver nitrate,
19, 400: heat of formation of (abst.), 2, 171: preparation of, in
the wet way (abst.), 7, 172: use of aniline as an absorbent of
(abst.), 10, 156
Cyanogen chloride, action of, on potassium-pyrrol (abst.), 5, 64: com-
pounds of the aromatic o-diamines (abst.), 7, 245: compounds in
soda-lyes, estimation of, r, 108: hydride, solid (abst.), r, 402:
iodide, vapor-density and melting-point of (abst.), 12, 225
Cyanurate, etliyl (abst.), 4, 267
Cyanuric acids, two new (abst.), 1, 289
Cyclical law of the elements, 20, 927
Dairy products, accuracy in analysis of, 15, 579
Dambose and inosite, identity of (abst.), 9, III
Daphnetin (abst.), 1, 167
Daturine, contributions to knowledge of (abst.), 2, 370
Decompositions, produced by action of aluminum chloride (abst.), 4, 170
Degràs, 16, 535
Dehydrating substances, action of, on acids (abst.), 2, 369
Density of gases, determination of (abst.), 4, 176: of liquids, relation
of, to heat of vaporization, 17, 969: vapor, determination of, - 12, 399
Desoxalic acid, constitution of (abst.), 2, 291
Detonating submerged nitroglycerol compounds, P. 1, 2, 2
Detonating submerged introgrycerol compounds,
Developer, use of quinolsulphonic acid as, 13, 159; 14, 155
Dextrin and soluble starch, estimation of, in food-stuffs, - 19, 191
Dextrins, transformation of glucoses into (abst.), 8, 181
Dextrose, crystallized, 4, 11: detection of, in cane-sugar, 1, 2: and in-
verted sugar, determination of, in presence of saccharose (abst.),
r, 344: dextrose. See also Glucose.
Diacetone, an aromatic (abst.), 6, 134
Diacetyl, tetrabrom-, symmetrical (abst.), 12, 160
Diallyl, oxidation of, 1, 272
Diallylacetic acid, action of hydrobromic acid and bromine on (abst.), 4, 271
Diallyl-iso-propylcarbinol (abst.), 2, 177
Diamidobenzenes, isomeric, action of sulphuric acid on (abst.), 2, 95
o-Diamidodiphenetol (abst.), 1, 495
Diamidoanthraquinone, constitution of (abst.), 1, 491
Diamines, aromatic, methods for determining the constitution of
(abst.), 7, 175: aromatic, nitroso derivatives of (abst.), 8, 55: aro-
matic, use of, in dyeing (abst.), 8, 231: behavior of, with nitrous
acid (abst.), 6, 162: primary, action of ethyl chloracetate on
(abst.), 5, 128
o-Diamines, action of carbonyl chloride upon (abst.), 12, 228: aro-
matic, cyanogen compounds of (abst.), 7, 245

Diamond, atomic weight of carbon from combustion of (abst.), 4, 237:
combustion of (abst.), 6, 36: note on (abst.), 12, 472
Diamonds, presence of, in a pegmatite from Hindustan (abst.), - 6, 105
Diamylbenzene (abst.), 1, 486
Diastase, action of, on starch (abst.), 1, 101: action of, on starch and
glycogen (abst.), 1, 173, 273: the chemical nature of, 17, 587;
18, 536: effect of antiseptics on the action of, 10, 91
Diazo compounds, on (abst.), 7, 228: action of alcohol on (abst.),
7, 148: action of, on β-naphthylamine (abst), 8, 22: new coloring-
matters from, etc., 2, 236: combination of, with thymenesulphonic
acid, 3, 112: experiments on (abst.), 8, 51: researches on (abst.), 12, 232
Diazo derivatives of nitrobenzyl cyanide (abst.), 5, 96
Diazo salts, preparation of dry (abst.), 12, 475
Diazoamido compounds, action of carbonyl chloride on (abst.), 4, 175
Diazoanisoïl chloride, action of, on phenols, 5, 32, 55
Diazo-β-naphthalene, action of, on phenols, 6, 151
Dibenzoylaniline and its isomers (abst.), 4, 171
Dibenzoylsuccinate, ethyl (abst.), 6, 84
Dibenzoylsuccinic acid, dilactone of (abst.), 6, 84: lactone of (abst.), 6, 84
Dibenzyl, action of chlorine upon (abst.), 1, 497
Dibromcapric acid (abst.), 1, 292
iso-Dibromcaproic acid, action of water on (abst.), - 4, 270
Dibromethylene, constitution of (abst.), 2, 90
Dicarbonyl group, condensations of compounds containing, with
aldehydes and ammonia (abst.), 5, 101
Dichloracetate, butyl (abst.), 8, 180
Dichloracrylic acid, decomposition by alkalies (abst.), 1, 163
Dichloradipic acid, preparation of, from a-dichlorpropionic acid
(abst.), 8, 35: properties of (abst.), 8, 36
Dichlorazophenol, constitution of (abst.), 1, 493
Dichlorhydrin, action of bromine upon (abst.), 1, 486
Dichlornaphthalene, conversion of naphthylaminesulphonic acids into
(abst.), 10, 42: and chlornaphthol from $\beta$ -naphtholsulphonic
acid (abst.), 4, 229
Dichlornaphthoquinone, action of amines on (abst.), - 4, 265
Dichlorpropionic acid, formation of, from glyceric acid (abst.), 1, 289
a-Dichlorpropionic acid, ethoxyacrylic acid from (abst.), 12, 227:
preparation of dichloradipic and pyrocinchonic acids from (abst.), 8, 35
Diethoxymethylene, 1, 523 Diethoxyresorcinol, action of nitrous acid on (abst.), 1, 161
Diethyleneamines, methylated (abst.), 2, 223 Diethylnaphthylamine, action of carbon oxychloride on (abst.),
Dietry maphing admine, action of carbon oxychioride on (abst.),

4, 201: action of sulphuric acid on (abst.), 4, 201: preparation of
(abst.), 4, 200
Differences allowable in metallurgical analyses, 18, 35
Diffusion of some organic and inorganic compounds (abst.), - 5, 22
Digallic acid (abst.), 1, 161: work of Schiff on, 20, 42
Digestibility of insoluble carbohydrates of wheat, - 19, 309, 315
Digestion of albuminoids, influence of tartrates and lactates upon,
12, 394: effect of coal-tar colors, on, 18, 1092: gastric (abst.),
4, 234: influence of alum, etc., upon, 16, 587: peptic, influence of
antiseptics on, 19, 889: salivary, behavior of antiseptics toward, 14, 4
Digestive ferments, action of certain bodies on, 19, 744
Digitaline, digitaleine, and digitine, estimation of (abst.), - 6, 42
Dihydroxybenzoic acids and iodosalicylic acids (abst.), 5, 29, 59 Dihydroxyfumaric acid, preparation of (abst.), 2, 172
Dihydroxyfumaric acid, preparation of (abst.), 2, 172
Dihydroxytoluenes (abst.), 5, 61
Diketones, color reaction for (abst.), 8, 58: preparation of a series of
(abst.), 10, 14
Dilactones (abst.), 4, 271
Dilatometer, differential, and its use on alums (abst.), - 7, 77
Dilution, influence of, on chemical change (abst.), 2, 345: of liquid
reagents by formula, 19, 586
Dimethylamine bromoselenate, 20, 573
Dimethylamine, reactions of, with metallic solutions (abst.), - 2, 133
Dimethylaniline, action of cenanthaldehyde and cenanthyl chloride
on, in the presence of zinc chloride (abst.), 9, 7
Dimethylaniline ferrocyanide, analysis of, 17, 929
Dimethylaniline, p-amido-, action of, on aldehyde (abst.), - 7, 203
Dimethylanthracene hydride, and diphenylethane, synthesis of
(abst.), 6, 165, 166
(abst.), 6, 165, 166 Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 6, 84
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 2, 91 Dimethylnaphthylamine (abst.), 2, 91
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 5, 84 Dimethylenemalonic acid (abst.), 2, 91 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 6, 84 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 2, 91 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 β-Dinaphthylamine, derivatives of (abst.), 9, 193
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 2, 91 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 β-Dinaphthylamine, derivatives of (abst.), 9, 193 β-Dinaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), - 6, 237
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 2, 91 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 \$\beta\$-Dinaphthylamine, derivatives of (abst.), 9, 193 \$\beta\$-Dinaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), 4, 269
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 6, 84 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 \$\beta\$-Dinaphthylamine, derivatives of (abst.), 9, 193 \$\beta\$-Dinaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), - 6, 237 \$\beta\$-Dinitro compounds (abst.), 4, 269 Dinitrobenzoic acid (abst.), 2, 369
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 2, 91 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 β-Dinaphthylamine, derivatives of (abst.), 9, 193 β-Dinaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), - 6, 237 ο-Dinitro compounds (abst.), 4, 269 Dinitrobenzoic acid (abst.), 2, 369 α-Dinitronaphthalene (abst.), 2, 369
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 6, 84 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 \$\beta\$-Dinaphthylamine, derivatives of (abst.), 9, 193 \$\beta\$-Diniaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), - 6, 237 \$\beta\$-Dinitro compounds (abst.), 4, 269 Dinitrobenzoic acid (abst.), 2, 369 \$\beta\$-Dinitro-a-naphthol, amine derivatives of, 19, 927: chlorination of,
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 6, 84 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 \$\beta\$-Dinaphthylamine, derivatives of (abst.), 9, 193 \$\beta\$-Diniaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), - 6, 237 \$\beta\$-Dinitro compounds (abst.), 4, 269 Dinitrobenzoic acid (abst.), 2, 369 \$\beta\$-Dinitronaphthalene (abst.), 2, 369 Dinitro-a-naphthol, amine derivatives of, 19, 927: chlorination of, 19, 929: salts of, 19, 923
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 6, 84 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 β-Dinaphthylamine, derivatives of (abst.), 9, 193 β-Dinaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), - 6, 237 σ-Dinitro compounds (abst.), 4, 269 Dinitrobenzoic acid (abst.), 2, 369 α-Dinitronaphthalene (abst.), 2, 369 Dinitro-α-naphthol, amine derivatives of, 19, 927: chlorination of, 19, 929: salts of, 19, 923 Dinitrophenol, chlor-, and an aniline derivative of α-chlordinitro-
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 6, 84 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 β-Dinaphthylamine, derivatives of (abst.), 9, 193 β-Dinaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), - 6, 237 ο-Dinitro compounds (abst.), 4, 269 Dinitrobenzoic acid (abst.), 2, 369 α-Dinitronaphthalene (abst.), 2, 369 Dinitro-α-naphthol, amine derivatives of, 19, 927: chlorination of, 19, 929: salts of, 19, 923 Dinitrophenol, chlor-, and an aniline derivative of α-chlordinitro-phenol,
Dimethylazobenzene as an indicator in alkalimetry (abst.), - 7, 204 Dimethyl- and methyldiacetonamine (abst.), 2, 175 Dimethylenemalonate, ethyl (abst.), 6, 84 Dimethylenemalonic acid (abst.), 6, 84 Dimethylnaphthylamine (abst.), 2, 91 Dimethylphenylphosphine, reaction of, on ethylene bromide (abst.), 4, 206 Dimethyl-m-toluidine, nitroso-, constitution of (abst.), 2, 171 β-Dinaphthylamine, derivatives of (abst.), 9, 193 β-Dinaphthylamine, dinitro- (abst.), 6, 237: tetranitro (abst.), - 6, 237 σ-Dinitro compounds (abst.), 4, 269 Dinitrobenzoic acid (abst.), 2, 369 α-Dinitronaphthalene (abst.), 2, 369 Dinitro-α-naphthol, amine derivatives of, 19, 927: chlorination of, 19, 929: salts of, 19, 923 Dinitrophenol, chlor-, and an aniline derivative of α-chlordinitro-

Diphenols (abst.), 1, 293
Diphenyl, action of nitrogen trioxide on, 12, 54
Diphenyl derivatives containing sulphur (abst.), 2, 370
Diphenylacetic acid, synthesis of (abst.), 2, 436
Diphenylamine, action of nitrogen trioxide on, 12, 10: and aniline,
application of, in qualitative analysis (abst.), 5, 52: azo deriva-
tives of (abst.), 1, 396: and p-ditolylamine, derivatives of (abst.), 5, 24
Diphenylamine-acrolein, 4, 32
Diphenylarsenic acid, action of, on the animal organism (abst.), 1, 159
Diphenyldiamidonaphthol (abst.), 2, 170
Diplienylketone oxide, preparation of (abst.), 5, 93, 121: some deriva-
tives of (abst.), 5, 100
Diphenylethane, nitration products of (abst.), 8, 54: synthesis of
(abst.), 6, 191: and dimethylanthracene hydride, synthesis of
(abst.), 6, 165, 166
Diphenylguanidine chloride, action of nitric acid on (abst.), - 1, 489
Diphenylmethane, action of bromine on (abst.), 2, 366
Diphenylmethane, brom-, action of ammonia upon (abst.), 2, 436
Diphenylnitrosamine, azo derivatives of (abst.), 1, 396
Di- and triphenylphosphine (abst.), 5, 22
Dipropargyl, heat of combustion of (abst.), 4, 229
$\beta$ -Dipropylacrylic acid from $\beta$ -dipropylethylenelactic acid (abst.), - 7, 83
Dipropylamine, reactions of, with metallic salts (abst.), - 8, 201
β-Dipropylethylenelactic acid, preparation of β-dipropylacrylic acid
from (abst.), 7, 83
Dipyridine methylene iodide, 18, 988: trimethylene dibromide, - 18, 28
Diquinoleic base (abst.), 10, 190
Directors, meetings of the board of, 3, 97; 17, (33), (37); 18, (1), (25);
19, (6), (15), (41), (57); 20, (96)
Disazo- and azo-compounds of cresols (abst.), 7, 54
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halo-
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), 1, 385
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), * 1, 385 Dissociation, on Berthelot's formula for phenomena of (abst.), 6, 75:
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), 1, 385
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), * 1, 385 Dissociation, on Berthelot's formula for phenomena of (abst.), 6, 75:
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), ° 1, 385 Dissociation, on Berthelot's formula for phenomena of (abst.), 6, 75: of chlorine, a disclaimer, 1, 381: of elements at high temperatures
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), * 1, 385 Dissociation, on Berthelot's formula for phenomena of (abst.), 6, 75:    of chlorine, a disclaimer, 1, 381: of elements at high temperatures    (review), 1, 313 Dissociation-values determined by conductivity measurements, the reliability of, 20, 517
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), * 1, 385 Dissociation, on Berthelot's formula for phenomena of (abst.), 6, 75: of chlorine, a disclaimer, 1, 381: of elements at high temperatures (review), 1, 313 Dissociation-values determined by conductivity measurements, the reliability of, 20, 517 Distillation, automatic regulator for (abst.), 1, 584: fractional, appa-
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), * 1, 385 Dissociation, on Berthelot's formula for phenomena of (abst.), 6, 75:    of chlorine, a disclaimer, 1, 381: of elements at high temperatures    (review), 1, 313 Dissociation-values determined by conductivity measurements, the reliability of, 20, 517 Distillation, automatic regulator for (abst.), 1, 584: fractional, apparatus for, 16, 160: fractional, apparatus for, under reduced pres-
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), * 1, 385 Dissociation, on Berthelot's formula for phenomena of (abst.), 6, 75: of chlorine, a disclaimer, 1, 381: of elements at high temperatures (review), 1, 313 Dissociation-values determined by conductivity measurements, the reliability of, 20, 517 Distillation, automatic regulator for (abst.), 1, 584: fractional, apparatus for, 16, 160: fractional, apparatus for, under reduced pressure (abst.), 5, 114: fractional, in a current of steam (abst.),
Disazo- and azo-compounds of cresols (abst.), 7, 54 Disease and drinking water, 9, 44: immunity against, 15, 419 Disease germs, chemical products and physiological effects of, - 13, 61 Diseases, virulent, and chicken cholera (abst.), 2, 79 Disinfectants, relative effectiveness of, P. 1, 24 Displacements, reciprocal, between oxygen, sulphur, and the halogens, combined with hydrogen (abst.), * 1, 385 Dissociation, on Berthelot's formula for phenomena of (abst.), 6, 75:    of chlorine, a disclaimer, 1, 381: of elements at high temperatures    (review), 1, 313 Dissociation-values determined by conductivity measurements, the reliability of, 20, 517 Distillation, automatic regulator for (abst.), 1, 584: fractional, apparatus for, 16, 160: fractional, apparatus for, under reduced pres-

Distillations, method for conducting a number of, 16, 150: regulation
of pressure in (abst.), 1, 250
Disulphotetraphenylene, 13, 270
Disulphoxides, alkyl, synthesis of (abst.), 4, 176
Dithionic acid, formation of sulphuric acid during the preparation of
(abst.), 8, 177
Dithiourethanes, normal (abst.), 4, 268
p-Ditolylamine and diphenylamine, derivatives of (abst.), - 5, 24
Divaleryl, preparation of (abst.), 1, 397
Dolomite from York, Pa.,
Dopplerite of Aussee (abst.), 5, 63
Drainage, researches on (abst.), 10, 12
Dropping flask for standard solutions, 16, 156
Dropping glass, new form of (abst.), 1, 379
Drying oven, air, 15, 82: for drying in hydrogen, 15, 709: improve-
ment in, 19, 349
Drying sensitive organic substances, method of, 19, 388
Duboisine (abst.), 2, 225
Durene and hexamethylbenzene, chlorination products of (abst.), 8, 182
Dyeing and bleaching, on the chemistry of (abst.), 6, 197: of cotton
goods, as practised by Lancashire and Yorkshire dyers (abst.),
6, 142: effect of temperature in (abst.), 6, 199: use of aromatic
amines and diamines in (abst.), 8, 231: on the use of certain salts
of iron and aluminum in (abst.), 6, 172
Dyeing properties of anthragallol (abst.), 6, 142: test, accuracy of, 17, 468
Dyes, artificial, progress in manufacture and use of, 15, 456
Dye-stuff, blue, from pyrrol (abst.), 6, 161: a new (abst.), 1, 180: new,
from o-amidophenol (abst.), 1, 493
Dye-stuffs, azo (abst.), 4, 173: from coal-tar, effect of, on digestion,
18, 1092: new (abst.), 2, 367: new class of (abst.), 5, 28: from
phenol (abst.), 7, 229: resulting from the simultaneous oxidation
of p-diamines with monamines (abst.), 6, 289: used in United
States, 15, 567
Dynamics, chemical, explanation of Gladstone and Tribe's law in
(abst.), 7, 26
Dynamite, manufacture of, - • 19, 500
Earth metals contained in samarskite, study of (abst.), 4, 222: rare,
contributions to chemistry of (abst.), 4, 169
Earth-nut oil, sensibility of, to heat when electrified (abst.), - 10, 173
Ebullioscope, modified form of, 18, 1063: studies on the (abst.), - 1, 572
Edestin (from barley), 17, 545: (from rye kernel), 17, 437: the most
common globulin, 18, 621: properties of, 16, 528: a proteid of the
hemp, squash, castor bean, etc., 18, 621
Editorial, 12, 4
Education of industrial chemists, 15, 481, 627
Egg substance, quantitative determination of (abst.), - 12, 176
Eggs, coloring-matter in yolk of (abst.), 12, 165

Eggertz' carbon test, influence of sulphur on (abst.), - 10, 115
Eikosylene (abst.), 1, 164
Elaidic and oleic acids, oxidation of, with potassium permanganate
(abst.), 8, 42
Elaidin reaction (abst.), 8, 232
Electric arc light, action of, on gaseous bodies, and use for demon-
strations (abst.), 12, 351
Electrical furnace (abst.), 18, 924: for 110-volt circuit, 20, 769
Electric heating applied to metallurgy, history of, 18, 287
Electrical conductivity of dilute salt solutions (abst.), 6, 125
Electrolysis of carbon in ammonia (abst.), 8, 178: of carbon com-
pounds (abst.), 8, 19: new results in (abst.), 2, 43: synthesis of
organic compounds by (abst.), 4, 239: unusual case of (abst.),
2, 223: use of, in technical chemical processes, 16, 49
Electrolytes, resistance of, method of determining, 20, 206
Electrolytic determination of metals, use of pyrophosphate double
salts in (abst.), 12, 168: experiments (abst.), 2, 135: reduction of
p-nitro compounds, 17, 855: separations, 16, 93, 420; 17, 612:
separation of metals, notes on, 13, 140: separation of the metals of
the second group, 15, 195: stand, a new, 20, 268: stand, a cheap
adjustable, 18, 558
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274 Element, new atmospheric, 16, 719
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274 Element, new atmospheric, 16, 719 Elements, cyclical law of, 20, 927: dissociation of, at high tempera-
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274 Element, new atmospheric, 16, 719 Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274 Element, new atmospheric, 16, 719 Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274 Element, new atmospheric, 16, 719 Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274 Element, new atmospheric, 16, 719 Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113 Elephant's milk, composition of, 3, 55; 4, 157
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274 Element, new atmospheric, 16, 719 Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113 Elephant's milk, composition of, 3, 55; 4, 157 Endowment fund, report of committee on, 3, 121
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364: action of hydrocyanic acid upon (abst.), 1, 160: action of sodium
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91
adjustable, 18, 558 Electroplating bath, method of maintaining uniform composition of, 15, 274 Element, new atmospheric, 16, 719 Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113 Elephant's milk, composition of, 3, 55; 4, 157 Endowment fund, report of committee on, 3, 121 Energy, chemical, 15, 421 Eosin, use of, for coloring tomatoes, 15, 191 Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364: action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91 Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectro-
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91  Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectroscopic reactions of (abst.),
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91  Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectroscopic reactions of (abst.), 1, 103  Errors in volumetric analysis due to changes of temperature, correc-
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91  Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectroscopic reactions of (abst.), 1, 103  Errors in volumetric analysis due to changes of temperature, correction of,
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91  Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectroscopic reactions of (abst.), 1, 103  Errors in volumetric analysis due to changes of temperature, correc-
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91  Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectroscopic reactions of (abst.), 1, 103  Errors in volumetric analysis due to changes of temperature, correction of, P. 1, 188  Erythrol, products of reduction of, by formic acid (abst.), - 6, 133  Essential oils. See Oils.
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91  Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectroscopic reactions of (abst.), 1, 103  Errors in volumetric analysis due to changes of temperature, correction of, P. 1, 188  Erythrol, products of reduction of, by formic acid (abst.), 6, 133  Essential oils. See Oils.  Esters of hydracids, formation of, in the gaseous state (abst.), 1, 172:
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91  Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectroscopic reactions of (abst.), 1, 103  Errors in volumetric analysis due to changes of temperature, correction of, P. 1, 188  Erythrol, products of reduction of, by formic acid (abst.), - 6, 133  Essential oils. See Oils.  Esters of hydracids, formation of, in the gaseous state (abst.), 1, 172: influence of the isomerism of alcohols and acids in the formation
adjustable, 18, 558  Electroplating bath, method of maintaining uniform composition of, 15, 274  Element, new atmospheric, 16, 719  Elements, cyclical law of, 20, 927: dissociation of, at high temperatures (abst.), 1, 313: early American arrangement of, 17, 947: in water analysis, modes of combination of (abst.), 1, 336: working hypothesis that they are compound bodies (abst.), 1, 113  Elephant's milk, composition of, 3, 55; 4, 157  Endowment fund, report of committee on, 3, 121  Energy, chemical, 15, 421  Eosin, use of, for coloring tomatoes, 15, 191  Epichlorhydrin (abst.), 2, 93: action of bromine on (abst.), 2, 364:     action of hydrocyanic acid upon (abst.), 1, 160: action of sodium on (abst.), 2, 91: constitution of (abst.), 2, 91  Ergot, spectroscopic detection of, in flour (abst.), 1, 340: spectroscopic reactions of (abst.), 1, 103  Errors in volumetric analysis due to changes of temperature, correction of, P. 1, 188  Erythrol, products of reduction of, by formic acid (abst.), 6, 133  Essential oils. See Oils.  Esters of hydracids, formation of, in the gaseous state (abst.), 1, 172:

Ethanediquinolyline (abst.), 12, 232
Ethane, halogen substitution products of (abst.), 1, 246: nomencla-
ture and boiling-points of substitution products containing bro-
mine or bromine and chlorine (abst.), 1, 248
Ethane diphenyl-, products of nitration of (abst.), 8, 54: synthesis of
(abst.), 6, 191
Étard's reaction, on (abst.), 12, 231
Ether, luminous incomplete combustion of (abst.), 4, 259
Ethers and esters of hydroxy acids, boiling-points of (abst.), 1, 290; 2, 174
Ethers of phenylmesitylene carbinol (abst.), 8, 53
Etherification of hydracids in gaseous state (abst.), 1, 172: of hydroxy-
acids (abst.), 4, 205: influence of isomerism in (abst.), 2, 182:
rôle of auxiliary acids in (abst.), 1, 386: of the unsaturated mono-
basic acids (abst.), 2, 172
Etherion, a new gas, 20, 890
Ethoxyacetonitrile, P. 2, 124
Ethoxyacrylic acid from $\alpha$ -dichloropropionic acid (abst.), - 12, 227
Ethyl acetate, chlorinated derivatives of (abst.), 10, 17: acetate, con-
tinuous process for preparation of (abst.), 2, 366: acetoacetate,
condensation products of aldehydes with (abst.), 5, 101:
acetoacetate, condensation product of phenanthraquinone
with (abst.), 5, 92: carbonate, heat of combustion of (abst.), 6,
90: carbonate, new reaction of (abst.), 6, 171: chloracetate, action
of, on primary diamines (abst.), 5, 128: chlorocarbonate, action of,
on benzene, etc. (abst.), 4, 143: cyanate and cyanurate (abst.),
4, 267: glycocholate (abst.), 1, 289: mustard oil, new formation of
(abst.), 2, 221: nitrate, reduction of, by ethyl alcohol (abst.), 2, 434:
orthoformate, preparation of (abst.), 1, 167: oxide, combination
of, with titanium tetrachloride (abst.), 2, 434: phthalate (abst.),
2, 220: phthalylacetoacetate (abst.), 5, 238: silicate, heat of for-
mation of (abst.), r, 487: sulphate and acid sulphate (abst.), r,
492: thioxalate (abst.), 5, 236
$\beta$ -Ethylacetosuccinic ester, decomposition of (abst.), 5, 100
Ethylacetamide, halogen derivatives of, P. 2, 113
Ethylamine bromoselenate, 20, 573
Ethylaniline, compounds of, with naphthoquinone (abst.), - 5, 19
Ethylbenzene, oxidation of (abst.), 2, 92: synthesis of (abst.), 2, 92; 6, 160
Ethylborneol and active camphenol (abst.), 9, 112
Ethyldiacetic acid, detection of, in urine (abst.), 1, 252
Ethylsulphonic acid, preparation of (abst.), 12, 158
Ethylene, action of, on benzene, in presence of aluminium chloride
(abst.), 1, 390: illuminating power of, when burned with other
gases (abst.), 6, 46: liquid, for production of low temperatures
(abst.), 4, 238: nomenclature and boiling-points of substitution
products containing bromine or bromine and chlorine (abst.),
1, 248: substitution products containing bromine, or chlorine and

bromine (abst.), 1, 248: union of free hydrogen with (abst.), - 4, 235
Ethylene bromide, action of dimethylphenylphosphine on (abst.),
4, 206: bromide, action of, on ethyl malonate (abst.), 6, 83: bro-
mide, tetranitro- (abst.), 6, 131: chlorhydrin, action of, on pyri-
dine bases and on quinoline (abst.), 4, 272: chlorobromide
and some of its compounds (abst.), 5, 93: chlorosulphocyanate
(abst.), 2, 134: cyanide and hydrocyanic acid, behavior of, to
hydrochloric acid and alcohol (abst.), 5, 123: iodopicrate (abst.), 2, 224
Ethylene, dibrom-, constitution of (abst.), 2, 90: tetranitro-, deriva-
tives of (abst.), 6, 131: tetraphenyl-, preparation of (abst.), - 10, 81
Ethylene series of hydrocarbons, action of oxidizing agents upon
(abst.), 2, 185
Ethylidenepropionic acid, behavior with boiling sodium hydroxide
solution, 17, I
α-Ethyl-β-methylvalerolactone (abst.), 3, 100
Ethylsulphates of polyhydric alcohols and carbohydrates (abst.), - 2, 288
Ethylsulphonic acid, new method of preparing (abst.), 12, 158
Ethylsulphonic acid, β-chlor-(abst.), 2, 134
p-Ethyltoluene, brom-, oxidation of (abst.), 1, 284
$\alpha$ -Ethylvalerolactone, $\alpha$ -ethyl- $\beta$ -methylvalerolactone, and on a decom-
position of $\beta$ -ethylacetosuccinic ester (abst.), 5, 100
Ethyl- and methylacetylcyanate of ethyl (abst.), - 6, 164
Eudiometer, slight modification of Wilkinson's 3, 36
Eugenol, derivatives of, 19, 825
Eutexia (abst.), 7, 113
Evaporation of ammoniacal solutions, apparatus for (abst.), 9, 220:
automatic regulator for (abst.), 1, 584: of liquids, method of
accelerating (abst.), 1, 90: and plant transpiration, 20, 469: in
vacuo (abst.), 5, 235
Evigtokite (abst.), 5, 97
Excelsin, a globulin from the Brazil nut, 18, 621
Exchanges received by the library, 1892, 14, 400
Excursions at Cleveland, 18, (46)
Expedition, Norwegian North Sea, results of (abst.), - 1, 496; 2, 289
Experiments. See Lecture experiments.
Expert testimony, 16, 273
Explosion pipette, modification of Hinman's, 17, 771
Explosion of platinum retort for concentrating sulphuric acid (abst.), 2, 130
Explosions, gaseous, incompleteness of combustion in (abst.), - 10, 179
Explosive gelatine, spontaneous decomposition of, 6, 13
Explosives, determinations of the firing points of various, 12, 57:
determination of the strength of various, 12, 256: gelatine, 15, 552:
manufacture of (abst.), 10, 116: observations on (abst.), 1, 401:
relative sensitiveness of, 15, 10: researches upon (abst.), 1, 399:
solid and liquid, rate of propagation of detonation in (abst.), - 7, 93
Explosiveness of patroloum oil

matic, 15, 270: Graftian's (abst.), 10, 162: improved form of, 15, 123: Knorr's, modified form of, 16, 868: mechanical arrangement of, 19, 735: Soxhlet's, modified form of, 9, 182 Factors, analytical, table of, 18, 903
15, 123: Knorr's, modified form of, 16, 868: mechanical arrangement of, 19, 735: Soxhlet's, modified form of, 9, 182
ment of, 19, 735: Soxhlet's, modified form of, 9, 182
ractors, anarytical, table or,
Falilberg's saccharin, detection of (abst.), 9, 34: nature of (abst.), 9, 201
Fairfieldite, description of (abst.), 1, 392
Fairy rings, contribution to the chemistry of (abst.), 5, 102
Faraday's law (abst.), 6, 156
Faraday's law and the law discovered by Bouty (abst.), 6, 126
Fat, barley, composition of (abst.), 8, 274: bicuhyba (abst.), 8, 42:
butter (abst.), 12, 118: butter, and its substitutes, examination of,
8, 155: and casein, determination of, in feces, 19, 877; 20, 101:
and casein, determination of, in infant feces, 20, 765: in cochineal
(abst.), 8, 66: determination of, in milk, 10, 32; 15, 579: deter-
mination of, in milk (abst.), 8, 61: determination of, in milk,
optical (abst.), 1, 570: determination of, in milk, comparison of
Wanklyn and Adams' methods for, 12, 488: determination of, in
oil cake (abst.), 10, 157: determination of, in palm nut meal
(abst.), 8, 28: formation of, from carbohydrates in carnivora
(abst.), 8, 86: and glycerol, influence of, on secretion of uric acid
in man (abst.), 8, 185: and oil, detection of hydrocarbons in
(abst.), 8, 86: of porpoise milk (abst.), 8, 184: specific gravity of
(abst.), 10, 157
Fats, analysis of, comparative results in, 11, 144: analysis, of, new
method for, 16, 275: contained in tuberculosis bacilli, 18, 449:
determination of, P. 2, 84: determination of glycerol in (abst.),
4, 239: determination of resin in (abst.), 4, 192: determination of
stearic acid in, 19, 32: drying of (abst.), 8, 279: examination of
(abst.), 8, 83: iodine figure of, Gantter's process for determin-
ing, 16, 372: melting-point of (abst.), 8, 86: testing for a yellow
azo color in, 20, 110, 889: unsaponifiable, examination of oils con-
taining (abst.), 8, 39
Fats and oils, analysis of (abst.), 10, 194: determination of solid fat
in, 18, 259: formation of basic salts in the saponification of (abst.),
8, 41: methods of testing, 15, 153: Muter's method for analysis of,
15, 110: quantitative estimation of (abst.), 6, 245
Fats and resins, Koettstorfer figure of dark-colored, - 16, 408
Fats and soaps, determination of rosin in (abst.), 8, 205
Fatty acids. See Acids, fatty.
Fatty bodies, influence of, on the putrefaction of albumin (abst.),
8, 230: method for determining fusion and solidification points of
(abst.), 8, 65: studies on (abst.), 7, 288
Fatty compounds, solubility of mercuric iodide in (abst.), 8, 40
Fatty materials in candles, determination of melting-point of, - 16, 825
Fatty matter in an Irvingia from Cochin China (abst.), 8, 110
Fatty matters, examination of (abst.), 8, 83: separation of, from

strychnine and morphine (abst.), 9, 15
Fatty oils, detection of, in mineral oils (abst.), 8, 39: detection of
mineral oil in (abst.), 8, 38: detection of, when mixed with
mineral oils (abst.), 7, 226 : on the solidification of (abst.), 6, 198:
solubility of iodine in (abst.), 7, 202
Fatty series. See Aliphatic series.
Feces, determination of fat and casein in, - 19, 877; 20, 101; 20, 765
Feldspars, action of sodium hydroxide and carbonate on (abst.), 4, 199
Ferment, alcoholic, soluble, non-existence of (abst.), 1, 403
Ferments, digestive, action of certain bodies on, 19, 744
Fermentation, action of hydrogen dioxide on (abst.), 4, 239: of beet-
root juice (abst.), 2, 91: evolution of free nitrogen in (abst.),
4, 267: of glucose syrups, 16, 808: succinic (abst.), 1, 273:
sulphydric (abst.), 1, 489
Ferrates, the, 17, 760
Ferric alum, speed of reduction of, by sugar, 19, 683: arsenate, crys-
tallized, artificial production of (abst.), 2, 132: chloride, speed of
reduction of, by stannous chloride, 16, 314: ethylate and col-
loidal ferric hydroxide (abst.), 6,92: hydroxide as a precipitant
for suspended clay, 13, 100: hydroxide, notes on (abst.), 5, 99:
oxide, action of, on potassium chlorate (abst.), 4, 142: oxide, re-
duction of, with pulverized zinc (abst.), 1, 96: oxide, separation
of, from alumina (abst.), 7, 124: salts, reaction between, and
oxalic acid (abst.), 8, 198: salts, zinc, magnesium, and iron as re-
ducing agents with (abst.), 4, 223: sulphate, basic, molecular
weight of (abst.), 5, 100: sulphate, an earthy, from Arkansas, 4, 61
Ferricyanides, heat of formation of some (abst.), 4, 233
Ferrocyanides, cobalt nitrate as an indicator for, 17, 474: and cyanides,
manufacture of, from trimethylamine (abst.), 6, 199: new indi-
cator for, 17, 473: manufacture of, 15, 569: metallic, special law
applicable to (abst.), 1, 388
Ferrocyanides, barium and calcium, use of organic bases in prepara-
tion of, 17, 927: zinc and manganese, - 18, 1100: 19, 542, 547
Ferro-silicon and silico-spiegel, determination of silicon in, - 19, 138
Ferro-tungsten, experiments on a, 16, 297
Ferrous oxide, determination of, in silicates (abst.), 1, 85: sulphate,
application of, in agriculture and value as plant food (abst.),
7, 54 : sulphate, value of, as a manure (abst.), 6, 77
Fertilizer, value of ferrous sulphate as a, 7, 54
Fertilizer analysis, legislation on, 10, 2: recent methods in,  Fertilizer industry, development and extent of, 15, 321
Fertilizer industry, development and extent of, 15, 321
Fertilizers, determination of nitrogen in (abst.), 9, 13: determination
of phosphoric acid in (abst.), 6, 241: produced in United States,
15, 564: quick method for estimating phosphoric acid in (abst.), 7, 210
Fever, typhoid, at Mt. Holly, N. J. in 1887, 9, 146
Fiber, crude, determination of, in cereals, 19, (39): crude, determina-
tion of, in food-stuffs, 19, 196: crude, in sugar-cane, estimation of,

16, 308: determination of, in bagasse, sources of error in, 18, 462:
of wheat, characteristics of, 19, 294
Fibrin, decomposition of hydrogen dioxide by (abst.), 5, 120
Filbert, proteids of, 18, 618
Fillamite, description of (abst.), 1, 392
Filter, efficacy of Breyer's "micro-membrane," 8, 192
Filter paper, matter soluble in ether in (abst.), 8, 279: quality of
various makes of (abst.), 1, 376: Swedish, variations in quality of
(abst.), 1, 376: toughened (abst.), 7, 211
Filters of asbestos, 4, 248: 10, 69: method of folding (abst.), 9, 175:
porous porcelain, efficiency of, 9, 22: two new, - 7, 104
Filter-disk, an improved, 16, 58
Filtering siphon, automatic, 19, 817
Filtration of potable water (abst.), 6, 140: rapid (abst.), 6, 49: use of
asbestos in (abst.),
Fire, chemical methods of preventing and extinguishing, 17, 137, 251, 361
Fire-damp, method for detection of (abst.), 1, 367
Fish, putrefaction bases from (abst.), 7, 175
Flame, cause of diminishing, in lamps fed with inferior kerosene
(abst.), 6, 29
Flame reactions of silver, P. 1, 2, 33
Flashing point of kerosene, demonstration of (abst.), 5, 53
Flask, dropping, new form of, 7, 20: new calibrated weighing, 19, 198:
riask, dropping, new form of, 7, 20. new cambrated weighing, 19, 196.
weighing, for use as a burette, 4, 6
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapur-
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169 Flour and bread, analysis of (abst.), 1, 566
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169 Flour and bread, analysis of (abst.), 1, 566 Flours, old, presence of alkaloids in (abst.), 8, 167
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169 Flour and bread, analysis of (abst.), 1, 566 Flours, old, presence of alkaloids in (abst.), 1, 169 Fluoranthene, constitution of (abst.), 1, 169
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169 Flour and bread, analysis of (abst.), 1, 566 Flours, old, presence of alkaloids in (abst.), 1, 169 Fluoranthene, constitution of (abst.), 5, 99
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169 Flour and bread, analysis of (abst.), 1, 566 Flours, old, presence of alkaloids in (abst.), 1, 169 Fluoranthene, constitution of (abst.), 5, 99 Fluorene, p-amido-, (abst.), 6, 86
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169 Flour and bread, analysis of (abst.), 1, 566 Flours, old, presence of alkaloids in (abst.), 1, 169 Fluoranthene, constitution of (abst.), 5, 99 Fluorene, p-amido-, (abst.), 6, 86 Fluorides as agents for softening hard water, 12, 303: heat of forma-
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169 Flour and bread, analysis of (abst.), 1, 566 Flours, old, presence of alkaloids in (abst.), 1, 169 Fluoranthene, constitution of (abst.), 5, 99 Fluorene, p-amido-, (abst.), 5, 86 Fluorides as agents for softening hard water, 12, 303: heat of formation of (abst.), 6, 74: sodium (abst.), 6, 74: soluble, heat of com-
weighing, for use as a burette, 4, 6 Flasks, official methods for graduating, 20, 924 Flavopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpurine and isopurpurine, 1, 184 Flour, detection of alum in (abst.), 1, 566: examination of, for alumina and silica (abst.), 1, 110: physical and chemical analysis of, 6, 56: wheat, alumina a natural constituent of (abst.), - 9, 169 Flour and bread, analysis of (abst.), 1, 566 Flours, old, presence of alkaloids in (abst.), 1, 169 Fluoranthene, constitution of (abst.), 5, 99 Fluorene, p-amido-, (abst.), 6, 86 Fluorides as agents for softening hard water, 12, 303: heat of formation of (abst.), 6, 74: sodium (abst.), 6, 74: soluble, heat of combination of (abst.), 6, 74: use of, in manufacture of alcohol, - 14, 212
weighing, for use as a burette,

Food of the future, the synthetic (presidential address), 17, 155
Foods, cattle, recent progress in analysis of, 16, 174: detection of
salicylic acid in (abst.), 8, 278
Force, chemical, relative intensity of, 12, 292
Force function in crystals (abst.), 7, 199
Formaldehyde, preparation of (abst.), 2, 221: synthesis of polyhydric
alcohols by means of, 15, 704
Formanilide, nitriles from (abst.), 8, 74
Formic acid, oxidation of, by cupric ammonium solution (abst.),
1, 490: products of the reduction of erythrol by (abst.), 6, 133:
synthetic preparation of (abst.), 2, 94, 368: tribasic, esters of
(abst.), 1, 167
Formulae for mixing solutions (abst.), 6, 43: structural, of aromatic
compounds (abst.), 1, 169.
Fractional crystallization and isomorphous salts, 2, 408
Fractional distillation, apparatus for, 16, 160: in current of steam
(abst.), 7, 251: in vacuo, apparatus for (abst.), 5, 114: value of
1100
Gifferent methods (abst.), 2, 345 Franklinite, artificial production of (abst.), 9, 100
French chalk, use of, for packing and closing leakages (abst.), - 7, 214 Friedel-Craft's synthesis of ketones from phenolethers (abst.), - 12, 227
Fruit culture, contributions to the chemistry of, 1, 423 Fruit, mineral residues in sprayed, 16, 71
Fuchsine, detection of, in wine (abst.), 1, 574, 575, 576, 578; 8, 57:
detection and determination of, in wines (abst.), 7, 294: spectrum
of (abst.), 1, 578 : see also Rosaniline.
Fucose from sea weed, an isomer of rhamnose (abst.), 12, 476
Fuel, gaseous (abst.), 6, 26: for heating gas retorts (abst.), - 6, 105
Fulminate, mercury, chemistry of (abst.), 7, 122: mercury, deriva-
tives of (abst.), 7, 80: silver, decomposition of, by hydrochloric
acid (abst.), 6, 90: silver, Liebig's production of, without nitric
11 (1 () = ( 11 (1 ()
acid (abst.), 6, 46: sodium (abst.), 7, 201  Fulminates, constitution of (abst.), 6, 45: formation and constitution
Fulminuric acid, bronn- and chlor- (abst.), 7, 248 Fumaric acid, action of acetyl chloride on (abst.), 4, 221: action
of acetyl chloride and glacial acetic acid on (abst.), 5, 18: con-
tributions to the knowledge of (abst.), 1, 236
Fumaric acid, dihydroxy-, preparation of (abst.), 2, 172
Fungi, growth of, in absence of oxygen (abst.), 2, 136
Fungoid growth without oxygen, possibility of (abst.), 1, 494
Fur and wool, origin, structure, composition, etc., (abst.), - 10, 184 Furfural contained in fermented liquors, quantity of (abst.), 4, 229:
runtinal contained in Termented Inquors, quantity of (abst.), 4, 229:
determination of to soft in formanted liquids (-b. )
determination of, 19, 306: in fermented liquids (abst.), 4, 268: note on (abst.), 6, 132

Furtural-yielding constituents of plants, 17, 286: constituents of
wheat, 19, 301
Furfuran derivatives (abst.), 9, 214
Furnace, gas assay (abst.), 6, 244: electric, for the 110-volt circuit,
20, 769: gas, with arrangements for oxidation (abst.), - 1, 585
Fusel oil, alcohols of, 14, 45: Jorissen's reaction for (abst.), 4, 196, 207:
limits of, in spirituous liquors (abst.), 9, 17: quantitative deter-
mination of, in brandy (abst.), 5, 27, 50: in spirits, index to the
, 971
Fusing point: see Melting-point.
Fustic analysis, interpretation of results of, 17, 518
Galactin (abst.), 4, 231
Galactose and lactose, examination of (abst.), 7, 85
Galena from Newburyport, Mass., analysis of, 4, 214
Gallic acid, action of phthalic anhydride on (abst.), 4, 244, 296: con-
densation product of, with cinnamic acid (abst.), 9, 196: test for
(abst.), 5, 245
Gallium (abst.), 7, 77: atomic weight of (abst.), 1, 320: crystallized
oxychloride of (abst.), 4, 233: and indium, alloys of (abst.), 7, 139:
separation of (abst.), 4, 237, 238, 239, 240, 242, 273: separation of,
from zinc and iron (abst.), 4, 168: specific heat and heat of
fusion of (abst.), 1, 279
Gallon, the United States, 9, 186
Garbage, ignited, analysis of slag from, 6, 188
Gas analysis, apparatus for (abst.), 1, 283, 373: apparatus for rapid,
5, 76 : determination of hydrogen sulphide in, 20, 696 : determina-
tion of methane and hydrogen by explosion in, 17, 986: method
of, for use in gas works (abst.), 6, 31: modification of Hinman's
explosion pipette for, 17,771: technical, determination of methane,
carbon monoxide, and hydrogen by explosion in, 20, 343
Gas, apparatus for reducing measured volumes of, to normal condi-
tions (abst.), 6, 97 Gas, coal, estimation of hydrogen sulphide and carbon dioxide in
(abst.), 5, 112: influence of temperature of distillation on the
composition of (abst.), 6, 105: as a labor-saving agent in trade
(abst.), 6, 106: method of obtaining benzene from (abst.), 6, 175:
process for desulphurizing (abst.), 9, 223: new residual product
from (abst.), 6, 24
Gas generators, 16, 868; 17, 304, 420, 809; 18, 1057; 19, 818
Gas generators, formation of ammonium thiosulphate in, 8, 47
Gas, illuminating, determination of benzene in, 16, 697: determina-
tion of hydrogen sulphide in 4, 177: manufacture of, from wood, 2, 449
Gas-making by Coopers' lime process (abst.), 6, 31
Gas, a new (etherion), 20, 899
Gas, a new, in the atmosphere (argon), 16, 719
Gas-pressure regulator, an efficient, 20, 501
Gas regulator an improved 17, 781: a simple form of 18, 511

Gas retorts, heating of, by gaseous fuel (abst.), 6, 105
Gases, action of the electric arc light on (abst.), 12, 351: apparatus
for the rapid analysis of mixtures of, 3, 91: in Bessemer ingot,
composition of, 2, 146: in canned goods, method of collecting
and analyzing, 19, 733: combustible, analysis of (abst.), 1, 372:
condensation of, as a lecture experiment (abst.), 2, 95: contained
in uraninite, 17, 421: determination of the density of (abst.),
4, 176 : drying of (abst.), 7, 295; 10, 67 : electrolytic method of
liquefying (abst.), 10, 78: escaping from chemical works, anal-
ysis of (abst.), 4, 161: evolved during the conversion of grass into
hay (abst.), 5, 114: injury to vegetation by (abst.), 6, 198: in
iron and steel (abst.), 1, 165: liquefied, for production of low
temperatures (abst.), 4, 238: method for detection of minute
quantities of (abst.), 9, 19¢: occluded in cast steel (abst.), 6, 172:
produced by bacteria, 18, 157: researches on the compressibility
of (abst.), 1, 172
Gaseous explosives, incompleteness of combustion of (abst.), 10, 179
Gaseous fuel (abst.), 6, 26
Gasoline vapor, use of, in blast lamp (abst.), 1, 91
Gastric digestion (abst.), 4, 234
Gastric juice (abst.), 4, 242
Gasvolumeter, a new (abst.), 12, 175
Gay-Lussite in soda liquors (abst.), 4, 73: loss of soda by formation of
(abst.), 4, 74
Gelatin-dynamite, manufacture of, 15, 552
Gelignite, manufacture of, 15, 552
Gems, specific gravity of, 16, 205
Geranium, oil of, detection of adulterations in (abst.), - 1, 105
Geranium oil, Indian (abst.), 12, 234
German silver, analysis of (abst.), 10, 64
Germination in certain soils (abst.), 7, 25
Germs, disease, chemical products of, etc., 13, 61
Germs of microbes, influence of sunlight on (abst.), - 7, 77
Glass, alkaline reaction of, as a source of error in analysis (abst.),
6, 97: impervious to gases (abst.), 1, 91: manufacture of various
kinds of (abst.), 1, 172: scale of fusibility for, 16, 406: solubility
of, in certain reagents (abst.), 4, 219: used in the manufacture of
incandescent electric lamps, analyses of, 14, 61
Glass tubing, to cut (abst.), 9, 10
71' 1' (0
Gliadin (from rye kernel), 17, 439: properties of, 10, 525
Globulin, effect of acid on solubility of, in salt solutions, - 19, 482
Glover towers, chemical brick for, 17, 360
Glucinum, atomic weight of (abst.), 7, 113: salts of, purification of,
17, 604: separation of, from iron, 17, 688
Gluconic acid, action of hydrobromic acid on (abst.), 6, 162
Glucose, acidity of, 17, 402: anhydrous, detection of, in refined cane-
sugar, 5, 41: ash in, 17, 403: in blood, determination of (abst.),

1, 350: in butter, 20, 201: in cane-sugar, determination of, 1, 2:	
commercial, rotary power of, 2, 387: crystallized, 4, 11: detection	
of, in sugar, 2, 111, 428: determination of, by means of ammo-	
niated Fehling's solution (abst.), 1, 341: inactive, or neutral	
sugar (abst.), 2, 364: new cupric solution for estimation of (abst.),	
1, 344: rotary power of, effect of heating with dilute acids upon,	
2, 395: sweetness of (abst.), 1, 182: synthesis of (abst.), 12, 157:	
use of sulphites in making, 17, 28	51
Glucose syrup, acidity of, 17, 402: ash in, 17, 403: detection of, in	
sugar-house molasses, 3, 87: fermentation of, 16, 808: use of sul-	
phites in making, 17, 28	31
Glucoses, transformation of, into dextrines (abst.), 8, 18	31
Glucoside of kola, 19, 77: tartaric (abst.), 6, 13	32
Glucoside, phenol-, synthesis of (abst.), 2, 4	12
	52
Glue, with chromates, behavior, of, towards light (abst.), - 1, 49	33
Glutaric acid, trimethyl-, and tetramethylsuccinic acid (abst.), - 12, 15	
Gluten (abst.), 2, 37	
Glutenin, properties of, 16, 52	
	54
Glyceric aldehyde, (abst.), 9, 10	
	) 1
Glycerol, action of ammonium salts on (abst.), 8, 273: action of	
nitrous anhydride on (abst.), 5, 233: arsenic in, 17, 883: decom-	
position of tartaric acid in the presence of, at a high temperature	
(abst.), 8, 110: examination of, 17, 277: examination of commer-	
cial, 11, 125: and fat, influence of, on the secretion of uric acid	
in man (abst.), 8, 185: occurrence of trimethylene glycol in,	
17, 890: oxidation of, in alkaline solution (abst.), 8, 64: phorone	
from (abst.), 4, 176: test for (abst.), 1, 33	39
Glycerol, determination of (abst.), 8, 27; 10, 196: in aqueous solu-	
tions of (abst.), 4, 196: in fats (abst.), 4, 239: in oils (abst.),	
8, 102, 104: by oxidation (abst.), 10, 197: when produced by	
saponification of fatty oils (abst.), 8, 204: in soaps, lyes, and con-	
centrated glycerol (abst.), 10, 182: in sweet wines (abst.), 4, 191:	
in wine (abst.), 2, 36	55
Glycerolate, sodium (abst.), 8, 18	34
Glycinin, globulin of the soy bean 20, 42	23
91) 911111, 811 1111 11 1 1 1 1 1 1 1 1 1 1 1	23
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new	
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new method of making (abst.), 1, 39	
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new method of making (abst.), 1, 39 Glycogen, action of diastase, saliva, and pancreatic juice on (abst.),	90
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new method of making (abst.), 1, 39 Glycogen, action of diastase, saliva, and pancreatic juice on (abst.),	90
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new method of making (abst.), 1, 39 Glycogen, action of diastase, saliva, and pancreatic juice on (abst.), 1, 173, 27 Glycol, combination of aldehydes with (abst.), 9, 172: presence of,	90 73
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new method of making (abst.), 1, 39 Glycogen, action of diastase, saliva, and pancreatic juice on (abst.), 1, 173, 27 Glycol, combination of aldehydes with (abst.), 9, 172: presence of, in wine (abst.), 4, 24	90 73
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new method of making (abst.), 1, 39 Glycogen, action of diastase, saliva, and pancreatic juice on (abst.), 1, 173, 27 Glycol, combination of aldehydes with (abst.), 9, 172: presence of, in wine (abst.), 4, 24 Glycols and aldehydes, combinations of (abst.), 10, 11	90 73 42
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new method of making (abst.), 1, 39 Glycogen, action of diastase, saliva, and pancreatic juice on (abst.), 1, 173, 27 Glycol, combination of aldehydes with (abst.), 9, 172: presence of, in wine (abst.), 4, 24 Glycols and aldehydes, combinations of (abst.), 10, 11 Glycolchlorhydrin, action of carbonyl chloride on (abst.), - 7, 14	9° 73 42 18
Glycocoll, contained in juice of sugar-cane, 19, 881; 20, 133: new method of making (abst.), 1, 39 Glycogen, action of diastase, saliva, and pancreatic juice on (abst.), 1, 173, 27 Glycol, combination of aldehydes with (abst.), 9, 172: presence of, in wine (abst.), 4, 24 Glycols and aldehydes, combinations of (abst.), 10, 11 Glycolchlorhydrin, action of carbonyl chloride on (abst.), - 7, 14	73 42 14

Glycollide, P. 2, 118
Glycyrrhizine (abst.), 2, 180
Glyoxal-bisulphite of sodium, thermochemical examination of (abst.), 6, 189
Glyoxal, preparation of (abst.), 6, 89: transformation of, into glycolic
acid (abst.), 6, 90
Glyoxal acid sodium sulphite (abst.), 6, 189
Glyoxalines, some new (abst.), 5, 242: and oxalines (abst.), - 5, 19
Glyoxylic acid, contributions to the history of (abst.), - 1, 395
Gneiss of Manhattan Island, analysis of, P. 1, 69
Gold, assay of, by cyanide process, 18, 309: Cassel-Hinman process
for extracting, 18, 451: in copper materials, actual accuracy of
determinations of, 18, 816: determination of, in alloys (abst),
1, 99: loss, of, during scorification assay, 16, 313: purple colors
derived from (abst.), 7, 76
Gold-aluminum alloys, 16, 485
Gold and platinum, separation of, from antimony, arsenic, and tin
(abst.), 8, 278: qualitative separation of, from antimony, arsenic,
and tin (abst.), 10, 156
Gold and silver, method of toughening, in the melting crucible, 6, 182, 210
"Gold from wheat," British patent process, 19, (23)
Gooch crucible, improved form of, 15, 710: use of, as a silver volta-
meter, 12, 300
Graduated glass vessels and areometers, verification of, - P. 2, 128
Grape vine, chemistry of, P. 2, 35
Graphic methods, application of, in chemical studies, - 14, 128
Graphite, determination of, in minerals (abst.), 7, 123: determina-
tion of, in pig iron, 17, 873: in pig metal, experiments on the
determination of, 16, 104
Graphite crucibles, 6, 283
Grass, gases evolved during conversion of, into hay (abst.), - 5, 114
Gravimeter for sugar analysis, 16, 677
Grease, analysis of (abst.), 10, 115: fuller's, detection of mineral oil
in (abst.), 8, 38; fuller's, and suint, preparation of soap from
(abst.), 8, 87: and oils, improvements in bleaching or purifying
(abst.), 8, 43
Grinding, fine, observations on, 6, 229
Grits, Pennant, composition of (abst.), 4, 144
Guanidine thiocyanate, desulphurization of (abst.), - 2, 134
Guanidine, diphenyl-, action of nitric acid on chloride of (abst.), 1, 489
Guinochet's isomeric carballylic acid (abst.), 12, 166
Gum, wood-, and xylose from straw, etc. (abst.), 12, 158
Gum arabic (abst.), 4, 174
Gums of the arabin group, researches on (abst.), 6, 87 Gums and resins, chemical examination of (abst.), 10, 157
Gums and resins, chemical examination of (abst.), 10, 157 Guncotton, decomposition of, in closed vessels (abst.), 1, 399: early
specimen of, 19, (12): heat of formation of (abst.), 2, 435: re-
generation of the acid residues from the manufacture of (abst.), 9, 38
8 - 3-

Gunpowder, composition of modern, 15, 1: a flashing test for, 6, 7:		
preparation of charcoal for the manufacture of (abst.),	9,	190
Gymnemic acid (abst.),	ο,	191
Gypsum from Owasco, N. Y., composition of, P. r,	2,	62
TT		260
TY		240
	7,	- 1
		820
Halogen derivatives of ethyl acetamide, P.		
Halogens, determination of, in mixtures of binary compounds, 18, 688:	-,	
determination of, by titration with silver nitrate and ammonium		
sulphocyanate solutions (abst.), 1, 323: determination of, in vola-		
tile organic compounds (abst.), 5, 96: and nitrogen, analysis of		
organic substances containing (abst.), 1, 337: organic compounds		
containing, analysis of (abst.), 1, 254: and oxygen, relative affini-		
ties of (abst.), 1, 280: oxygen, and sulphur, combined with		
hydrogen, reciprocal displacements of (abst.), 1, 385: Volhard's		*
	_	
method for determination of (abst.), Haloid acids, action of gaseous, on nitrates, phosphates arsenates and	١,	535
		735
		164
Hardness, scale of, for glass, I		406
		114
		158
	8,	618
Heat of bromination of oils, determination of, 18, 378: of combina-		
tion of carbon monoxide (abst), 1, 279: of combination of soluble		
fluorides (abst.), 6, 74: compiled data on the action of, on metal-		
lic salts, 5, 135: disengaged by compression of solid bodies (abst.),		
6, 190: evolved on mixing anhydrous sodium sulphate with water		
(abst.), 1, 395: of hydration of salts (abst.), 6, 189: of transfor-		
mation of allotropic forms of tellurium (abst.), 10, 10: of transfor-		
mation of hydroxybenzoic acids (abst.), 8, 22: of vaporization,		
relation of, to density and boiling-point, 17, 969: waste, attempt		
	5,	106
Heat of combustion of alcohols and acids of the aliphatic series (abst.),		
8, 82: of benzene, dipropargyl and acetylene, constitution of ben-		
zene (abst.), 4, 229: of carbon and of organic compounds, method		
of measuring (abst.), 7, 146: of cereals and cereal products,		
20, 304: of certain amines (abst.), 7, 289: of fatty acids (abst.),		
8, 83: of fatty acids and their derivatives (abst.), 8, 183: of some		
ketones and of methyl and ethyl carbonates (abst.), 6, 90: and		
refraction, relations of (abst.), 4, 176: of some organic compounds		
(abst.), 10, 15: of sugars and solid hydrocarbons (abst.), -	),	112
Heat of formation of ammonia (abst.), 2, 433: of cuprous chloride		
(abst.), 2, 171: of cyanogen (abst.), 2, 171: of ethyl silicate		
(abst.), 1, 487: of fluorides (abst.), 6, 74: of fluoride, chloride,		

and oxychlorides of antimony (abst.), 6, 157: of gun-cotton and
pyroxylin (abst.), 2, 435: of hydroferricyanic acid (abst.),
4, 231, 233: of hydrogen phosphide hydrochloride and hydro-
bromide (abst.), 2, 89: of hydrogen silicide (abst.), 1, 487: of
hydrotelluric acid (abst.), 10, 10: of hydroxybenzoic acids (abst.),
8, 22: of nitrogen oxides (abst.), 2, 433: of some oxychlorides
and oxybromides of mercury (abst.), 6, 127: of persulphuric acid
(abst.), 2, 363: of phosphonium chloride and bromide (abst.), - 2, 89
Heat of neutralization of hydrofluoric acid (abst.), 6, 37: of hydroxy-
benzoic acids (abst.), 8, 21: of polyatomic phenols (abst.), - 7, 119
Heat of solution of some carbon compounds, 18, 146: of magnesium
sulphate (abst.), 7, 52: of mannitol, 18, 156: of potassium and
lithium sulphates (abst.), 7, 52
Heat-effect of coals, determination of, 17, 843
Heating, electric, applied to metallurgy, history of, - 18, 287
Heating test tubes, apparatus for, 19, 286
Helicin, synthesis of (abst.), 2, 42
Helium, 17, 421: atomic weight of, 18, 211: liquefaction of (note), 20, 466
Hematites, occurrence of vanadium in, P. 1, 84
Hemicellulose, hydrolysis of, 19, 293: preparation of, 19, 292: prepara-
Heptane from Pinus Sabiniana (abst.), 1, 286: of Pinus Sabiniana,
heptylene from, 4, 22
Heptylacetic acid, and some salts of, 5, 13
Heptylene, from heptane of Pinus Sabiniana, 4, 22
Heptylene bromide, action of alcoholic potash on (abst.), - 4, 254
Heptylmalonic acid, and some salts of, 5, 10
Hesperidine and isohesperidine, sugars of (abst.), 10, 79
Hexamethylbenzene and durene, chlorination products of (abst.), 8, 182
Hexylamine, a new (abst.), 12, 155
Hexyl alcohol, a new (abst.), 12, 155
Hexylenes from tertiary hexyl alcohols, and their polymerization
products (abst.), 1, 251
Hides, depilation of (abst.), 8, 97
Hippuric acid, source of, in urine of herbivorous animals (abst.),
1, 493; 2, 138
Hofmann medal, 6, 114
Homoquinine and cupreine (abst.), 7, 247
Honey from the aphis or plant louse, 14, 350: estimation of levulose
in, 18, 81, 189: poisonous, 19, (10)
Hop bitters, precipitation of (abst.), 9, 176
Hop substitutes in beer, detection of (abst.), 9, 220
Hops, bitter principles of (abst.), 8, 97
Hordein, a proteid from barley, 17, 562
Horse bean, proteids of the, 20, 393, 410
Human system, elimination of antimony from, P. 2, 142
Humates and soil fertility, 20, 861

Humite minerals, examination of (abst.), 7, 226
Humus, composition of, 19, 738: in soils, on the Grandeau method for
determination of, 16, 210
Hydracids, decomposition of, by metals (abst.), 1, 384
Hydrastine, soluble compound of, with monocalcium phosphate, 19, 838
Hydrates of zinc chloride (abst.), 8, 162
Hydrazine (abst.), 4, 240: from aldehyde-ammonia (abst.), 12, 165:
Curtius', 10, 164: compounds of, with ketones (abst.), - 5, 239
Hydrazobenzene and benzidine (abst.), 7, 59
Hydrazoic acid (abst.), 12, 473
Hydrindonaphthene (abst.), 6, 87: derivatives of (abst.), - 6, 160
Hydriodic acid, preparation of (abst.), 10, 77
Hydrobronic acid, preparation of pure (abst.), 8, 81: present methods
of preparing, with a process for preparing it from zinc bromide
and sulphuric acid (abst.), 6, 32: gas, separations of metals by
means of, 20, 797
Hydrobromic and nitric acids, conversion of sulphides into sulphates
by means of (abst.), 6, 33 Hydrocarbon, new (benzylmesitylene) (abst.), 5, 121
Hydrocarbon radicals, bivalent, metallic compounds containing (abst.), 4, 258
Hydrocarbons of the acetylene group, action of, on mercuric oxide and
salts (abst.), 6, 93: acetylene, silver nitrate as a reagent for (abst.),
10, 87: action of ammonia on the di- and tri-halogen substitution
products of (abst.), 12, 228: of American petroleum (abst.), 1, 384:
aromatic, color reactions of, with antimony and bismuth trichlo-
rides (abst.), 1, 544: aromatic, oxidation of substitution products
of (abst.), 1, 115, 283; 2, 221: association of, with rock salt in
nature (abst.), 10, 75: chrysene and related, synthesis of (abst.),
12, 160: decomposing action exercised by aluminum coloride on
some (abst.), 7, 142: of the ethylene series, action of oxidizing
agents upon (abst.), 2, 185: in fat and oil, detection of (abst.),
8, 86: and higher alcohols obtained from American petroleum
(abst.), 6, 95: and hydrogen, purified, products of burning, in
pure air, 6, 17: illuminating power of (abst.), 7, 213: recovery of,
from coal gas (abst.), 6, 27: solid, and sugars, heat of combustion
of (abst.), 9, 112: unsaturated, formation of, from addition prod-
ucts of unsaturated acids (abst.), 1, 246
Hydrocarbostyrile, homologues of, synthesis of (abst.), 2, 170
Hydrocellulose, transformation of, into friable pyroxylins (abst.), - I, 400
Hydrochinone. See Quinol.  Hydrochloric acid, action of, upon amidoazo-compounds (abst.), 7, 86:
action of, on sodium vanadate, 16, 578: and chlorine, influence of
the ammonia soda process on the value of (abst.), 6, 174: combinations of zinc chloride with (abst.), 8, 163: detection of free chlo-
rine in (abst.), 12, 73: solubility of some chlorides in the presence
of (abst.), 8, 163: titration of, for chlorine, P. 2, 149; 1, 18: gas,
separations of metals by means of, 18, 1029
separations of metals by means of,

Hydrocinchonidine, behavior and occurrence of (abst.), 4, 267
Hydrocinnamic acid, formation of, in pancreatic digestion (abst.),
I, 166: series, aldehydes of (abst.), 12, 231: amido-, note on (abst.), 1, 243
Hydrocyanic acid, action of, on epichlorhydrin (abst.), 1, 160: action
of haloid acids on (abst.), 4, 221: combinations of, with hydro-
chloric and hydrobromic acids (abst.), 5, 67: and ethylene
cyanide, behavior of, with hydrochloric acid and alcohol (abst.),
5, 123: formation of, by oxidation of thialdine (abst.), - 1, 555
Hydroferricyanic acid (abst.), 4, 232: heat of formation of (abst.), 4, 231, 233
Hydroferrocyanic acid (abst.), 4, 231
Hydrofluoric acid, 18, 415: action of, on silica and silicates, 8, 210:
heat of neutralization of, with alkalies and alkaline earths (abst.),
6, 37: use of, in determining manganese in iron and ores, 20, 504:
occurrence of, in hydrogen peroxide, 17, 718
Hydrogen, carbon an impurity in, affecting determinations of atomic
weight, 12, 276: density of, 16, 188; 18, 198: determination of, by
explosion, in technical gas analysis, 20, 343: fractional combus-
tion of, in gaseous mixtures (abst.), 1, 372: free, union of, with
ethylene (abst.), 4, 235: in gaseous mixtures, determination of, by
absorption (abst.), 1, 371: inaccuracies in the determination of,
by combustion, 20, 510: new lines in the spectrum of (abst.),
2, 226: liquefaction of, 20, 466: (abst.), 6, 157: occlusion of, by
zinc dust (abst.), 7, 113: new process for producing (abst.), 8, 59:
source of, occluded by zinc (abst.), 7, 286
Hydrogen and carbon monoxide, relative affinity of oxygen for (abst.),
1, 164: and hydrocarbons, purified, products of burning in pure
air, 6, 17: and methane in the atmosphere, 17, 801: and methane,
determination of, by explosion, 17, 986
Hydrogen arsenide, behavior of, towards potassium hydroxide (abst.),
12, 353, 477
Hydrogen dioxide, action of, on coloring-matter of blood, and on
haematosin (abst.), 4, 240: action of, on fermentation (abst.),
4, 239: action of, on manganese and lead dioxides (abst.), 2, 51:
action of, on the oxides of chromium (abst.), 8, 162: action of,
on the oxides of thallium (abst.), 2, 50: and ammonium nitrite,
production of, in burning hydrogen and hydrocarbons in air, 6, 17:
some analytical methods which employ, 18, 918: application of,
in quantitative analysis, 20, 513: behavior of, towards chlorine
(abst.), 2, 60: behavior of, towards the galvanic current (abst.),
2, 181: behavior of, towards potassium iodide (abst.), 1, 250: con-
stitution of (abst.), 18, 283: decomposition of, by fibrin (abst.),
5, 120: decomposition of, in presence of alkalies (abst.), 2, 365:
electrolysis of (abst.), 4, 240: estimation of (abst.), 1, 321: esti-
mation of titanium by, 13, 210: fluorine as an impurity in, 17, 718:
manufacture and applications of, 12, 64: oxidation by means of
(abst.), 9, 192: and ozone (abst.), 2, 34, 59, 147: and ozone, both
produced by action of air on moist phosphorus, 3, 5: reaction of,

with potassium permanganate, 11, 94: as a reagent in analysis		
(abst.), 1, 335: use of, in analysis of iron and steel, 15, 115: use of,		
for the determination of the metals of the iron family (abst.), 10, 19	2,	192
Hydrogen phosphide. See Phosphine.		
Hydrogen silicide, heat of formation of (abst.),	I,	487
Hydrogen sulphide, action of, on arsenic acid (abst.), 10, 11, 11:		
action of, on cupric salts (abst.), 1, 332: action of, on nickel chlo-		
ride (abst.), 4, 240: action of, on potassium tetra- and pentathionate		
(abst.), 4, 224: behavior of, towards alkaline solutions of alumi-		
num hydroxide (abst.), 1, 163, 334: behavior of nitro-compounds		
towards (abst.), 2, 178: estimation of, in coal gas (abst.), 4, 177;		
5, 112: generation of (abst.), 10, 65: hydrate of (abst.), 4, 242:		
magnesium hydrosulphide as a source of (abst.), 6, 311: note on,		
3, 30: occurrence and estimation of, in natural gas, 20, 696: prep-		
aration of (abst.), 1, 586: preparation of, for judiciary chemical		
investigations (abst.), 1, 293: preparation of, in toxicological in-		
vestigations (abst.), 1, 378, 393: substitute for, 17, 338: use of, in		
the dry way (abst.), 1, 48 Hydrogen sulphide generator, 16, 48, 63, 868; r		
Hydrogen sulphide generator, 16, 48, 63, 868; 1	7,	420
		869
Hydrometers, standardizing of, 9, 156: official methods for verifying, 2		
· · · · · · · · · · · · · · · · · · ·	,	225
Hydroquinidine, behavior and occurrence of (abst.),	4,	267
Hydroquinone. See Quinol.		
Hydrosorbic and sorbic acids, structural formula of (abst.),  Hydrotelluric acid, heat of formation of (abst.),		173
Hydroxyacids, boiling-points of esters and ethers of (abst.), 1, 290;	υ,	10
2, 174: etherification of (abst.),	1	205
Hydroxyacrylic acid (abst.),		226
Hydroxybenzoic acids, heat of neutralization of (abst.), 8, 21: heat of		220
formation and transformation of (abst.),		22
$\beta$ -Hydroxybutyric acid in diabetic urine (abst.), 7, 177: levorotary, in	-,	
the blood of a diabetic patient (abst.),	9,	113
Hydroxides, alkaline (abst.),		283
Hydroxylamine (abst.), 5, 232: action of, upon imido ethers and		
amidines (abst.), 6, 236: action of, on nitriles (abst.), 6, 160: reac-		
tions of, contributions to knowledge of (abst.), 5, 126: volumetric		
determination of (abst.),		346
Hydroxylamine hydrochloride (abst.),	5,	62
Hydroxymethylanthraquinone (abst.),	5,	240
Hydroxypropylmalonic acid and its lactone (abst.),	4,	270
	5,	19
p-Hydroxysalicylic acid (2,5-dihydroxybenzoic acid) (abst.),	I,	495
Hydroxyvalerianic acid from allyldimethylcarbinol (abst.), -		178
Hyoscyamine (abst.),		225
Hypobromite solution, stability of, and its use for the titration of oils,		
etc. (abst.),	6,	99

Hypochlorites, action of, on urea (abst.), 1, 101
Hypochlorous acid, decomposition of solutions of, in sunlight (abst.), 7, 120
Hyponitric acid, determination of, in nitric and sulphuric acids,
P. 2, 149: titration of, in nitric and sulphuric acids, - 1, 18
Hyponitric anhydride, action of, on organic bodies 2, 277, 416
Hyponitrites (abst.) 6. 75
Hyposulphites; hyposulphurous acids. See Thiosulphates; Thiosul-
phuric acid.
Hyposulphuric acid, composition and basicity of (abst.), - 1, 497
Hypoxanthine, question as to production of, from certain albuminoids
(abst.), 2, 224
Hypoxanthine and adenine (abst.), 12, 161
Ice, artificial, manufacture of, P. 1, 2, 74
Ilex cassine, analysis of the leaves of, 7, 100
Illuminating apparatus, 17, 496
Illuminating power of ethylene when burned with other gases (abst.),
6, 46: of hydrocarbons (abst.), 7, 213: of methane (abst.), - 7, 213
Imides, conversion of nitriles into (abst.), 5, 123
Imido-ethers, action of phenylhydrazine upon (abst.), 6, 235: and
amidines, action of hydroxylamine on (abst.), 6, 236
Inactose or neutral sugar (abst.), 10, 16
Index, international, to chemical literature, 15, 574: to literature of
stereochemistry, 14, 241
Indexing chemical literature, report of committee on, 11, 121; 18, 940; 19, 766
Indicator, new, for acidimetry (abst.), 4, 166: in alkalimetry, di-
methylazobenzene as (abst.), 7, 204: new, for alkalimetry (abst.),
4, 166: to detect acid nature of weak acids (abst.), 8, 79: for
neutrality (abst.), 5, 245
Indicators, behavior of the alkaline phosphates towards (abst.), 5, 53:
a study of, 17, 822: use of litmus, rosolic acid, methyl-orange,
phenacetolin, and phenolphthalein as (abst.), 6, 49, 242
Indigo, artificial, preparation of, 4, 81: derivatives of, 4, 81: deter-
mination of, on the fibre (abst.), 9, 16: determination of indigotin
in, 6, 185: molecular weight of (abst.), 1, 254: natural, printing
of, on calico (abst.), 6, 104: process for extraction of indigotin
from, 12, 302: quantitative spectroscopic examination of pure
(abst.), 6, 97: structure of (abst.), 6, 135: synthesis of, from
monobromacetanilide (abst.), 12, 163: testing, methods of, 7, 16:
testing, remarks on the methods of (abst.), 7, 211
Indigo blue, preparation of, from o-nitrobenzaldehyde (abst.), 5, 63:
colors, examination of (abst.), 9, 120: group, compounds of
(abst.), 4, 175; 5, 21
Indigodicarboxylic acid (abst.), 8, 51 Indigotin, commercial determination of, 10, 178: extraction of, from
indigo (abst.), 12, 302: methods of determining, - 13, 32
Indirect analysis, 17, 466; 18, 182
Indophenols, on (abst.), 6, 82
Indium and gallium alloys of (abst.)

Indium in tungsten minerals, 20, 811
Induline group, researches on (abst.), 5, 96
Indulines, on (abst.), 6, 8
Industrial chemistry, review of, 4, 72: review of recent progress in, 19, 894
Industrial chemists, education of, 15, 627
Ink, writing, action of bleaching agents upon (abst.), - 9, 224
Inosite (abst.), 9, 103: and dambose, identity of (abst.), - 9, 111
Insect powder, active principle of (abst.), 1, 390
Intensity, relative, of chemical force, 12, 29
International Chemical Congresses, committee of conference on, - 16, 886
International standards for the analysis of iron and steel, work of com-
mittee on, 16, 140, 280
Inversion of sugar by salts, 18, 120, 693
Iodide coatings and sublimates (abst.), 10, 26
Iodide, allyl, preparation of (abst.), 9, 100
Iodides, action of heat on, 5, 155: alkyl, note on, 13, 144: blowpipe
reactions for, P. 2, 110: decomposition of, under influence of
actinism, 2, 270: influence of light on the decomposition of, 1, 65:
soluble, action of light on, 2, 249
Iodimetric studies (abst.), 9, 3
Iodimetry, founded upon use of permanent standard solutions (abst.), 1, 490
Iodine, action of, on naphthalene, at high temperatures (abst.), 4, 232:
action of, on potassium selenocyanate (abst.), 6, 34: action of,
on silver salts of some acids of aromatic series (abst.), 4, 264:
on sirver saits or some acras or aromatic series (absc.), 4, 204.
action of, on stannous chloride, 19, 515: behavior of, at high tem-
action of, on stannous chloride, 19, 515: behavior of, at high tem-
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hy-
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10,
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.),
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.),
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.),
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.), 1, 9: Iodine solution, standard, a correction, 16, 112: standard, preparation of, 16, 431: standardizing (abst.), 8, 200
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.), 1, 9: Iodine solution, standard, a correction, 16, 112: standard, preparation of, 16, 431: standardizing (abst.), 8, 20: Iodine, chlorine, and bromine, determination of, in mixtures, 18, 688:
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.), 1, 9: Iodine solution, standard, a correction, 16, 112: standard, preparation of, 16, 431: standardizing (abst.), 8, 20: Iodine, chlorine, and bromine, determination of, in mixtures, 18, 688: (abst.), 6, 49: and separation of (abst.), 1, 38:
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.), 1, 9: Iodine solution, standard, a correction, 16, 112: standard, preparation of, 16, 431: standardizing (abst.), 8, 20: Iodine, chlorine, and bromine, determination of, in mixtures, 18, 688: (abst.), 6, 49: and separation of (abst.), 1, 38. Iodoform, action of quinoline on (abst.), 5, 66: formation of acetylene
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.), 1, 90: Iodine solution, standard, a correction, 16, 112: standard, preparation of, 16, 431: standardizing (abst.), 8, 200: Iodine, chlorine, and bromine, determination of, in mixtures, 18, 688: (abst.), 6, 49: and separation of (abst.), 1, 38. Iodoform, action of quinoline on (abst.), 5, 66: formation of acetylene from (abst.), 6, 37: manufacture of (abst.), 10, 189: preparation
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.), 1, 90: Iodine solution, standard, a correction, 16, 112: standard, preparation of, 16, 431: standardizing (abst.), 8, 200: Iodine, chlorine, and bromine, determination of, in mixtures, 18, 688: (abst.), 6, 49: and separation of (abst.), 1, 38: Iodoform, action of quinoline on (abst.), 5, 66: formation of acetylene from (abst.), 6, 37: manufacture of (abst.), 10, 189: preparation of, by electrolysis (abst.), 7, 86:
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.), 1, 90: Iodine solution, standard, a correction, 16, 112: standard, preparation of, 16, 431: standardizing (abst.), 8, 200: Iodine, chlorine, and bromine, determination of, in mixtures, 18, 688: (abst.), 6, 49: and separation of (abst.), 1, 38: Iodoform, action of quinoline on (abst.), 5, 66: formation of acetylene from (abst.), 6, 37: manufacture of (abst.), 10, 189: preparation of, by electrolysis (abst.), 7, 80: Iodoform, methyl- (abst.), 7, 80: Iodoform, methyl- (abst.),
action of, on stannous chloride, 19, 515: behavior of, at high temperatures (abst.), 2, 371: behavior of silver haloid salts towards (abst.), 5, 245: calculation for making standard solution of, for sulphur determinations, 19, 261: compounds of metallic hydroxides with, 19, 333: determination of (abst.), 1, 490; 9, 33; 10, 27: determination of, in kelp (abst.), 1, 563: extraction of, from marine plants (abst.), 2, 434: molecular weight of, in solution (abst.), 10, 155: oxidation of, in the process of nitrification (abst.), 7, 287: recovery of, from organic iodide residues (abst.), 5, 232: separation of, from chlorine in the dry way (abst.), 7, 32: solubility of, in fatty oils (abst.), 7, 20: Iodine acetate, non-existence of (abst.), 1, 161: trichloride, specific gravity of (abst.), 1, 90: Iodine solution, standard, a correction, 16, 112: standard, preparation of, 16, 431: standardizing (abst.), 8, 200: Iodine, chlorine, and bromine, determination of, in mixtures, 18, 688: (abst.), 6, 49: and separation of (abst.), 1, 38: Iodoform, action of quinoline on (abst.), 5, 66: formation of acetylene from (abst.), 6, 37: manufacture of (abst.), 10, 189: preparation of, by electrolysis (abst.), 7, 86:

Iretol, 16, 847: properties and reactions of,  Iridin, the glucoside of iris root, 15, 351, 400; 16, 847: constitution of, 16, 856  Iridium, atomic weight of (abst.), 1, 320: electro-deposition of,  Irigenin from iris root, 15, 353: constitution of, 16, 856: derivatives of, 15, 400  Iron, action of hydrogen peroxide on (abst.), 10, 193: alloy of, with  tungsten, 19, 110: amalgamation of, P. 1, 49: behavior of carbon  toward, at high temperatures (abst.), 8, 72: carbon in the gases  evolved by solution of (abst.), 10, 25: cast, influence of silicon on  the heat of solution of, 20, 690: chrome, analysis of (abst.),  12, 117: detection of, by means of salicylic acid (abst.), 1, 335:  electrolysis of pyrophosphate of (abst.), 12, 170: gases enclosed  in (abst.), 1, 165: influence of silicon on the properties of (abst.),  10, 159: mixture for separating carbon from (abst.), 10, 156:  oxidized, from an old condenser, analysis of (abst.), 4, 219: pig,  standard samples of (note), 20, 988: rail, analysis of an old, 19, 9:  reduction of, by hydrogen (abst.), 1, 401: reduction of, by zinc
dust (abst.), 1, 96: some peculiar forms of, 19, 108
Iron amalgam (abst.), 1, 276: phosphide and phosphate, analytical
properties of, 16, 477: salts useful in dyeing (abst.), 6, 172: sili-
cides, 17, 923 Iron analysis, determination of carbon, in iron, 18, 1087: (abst.), 10,
155: in cast iron, 5, 56: (abst.), 1, 88; 6, 193: in iron and steel,
15, 213, 450: (abst.), 4, 165; 12, 352: colorimetric (abst.), 1, 371:
gas-volumetric (abst.), 10, 68: determination of combined carbon,
in iron and steel, P. 2, 72: determination of chromium, in iron and steel (abst.), 10, 66: determination of manganese in iron
alloys (abst.), 1, 83: in cast iron and spiegel (abst.), 6, 242: de-
termination of phosphorus, in iron, P. 1, 167; P. 1, 2, 58; 18, 955:
in iron and steel (abst.), r, 104; 9, 8: in iron and its ores (abst.),
6, 193: determination of silicon, in iron and steel (abst.), 1, 104, 285, 371, 562; 4, 165: determination of sulphur, in iron, 18, 1079:
in pig iron, 19, 114: in iron and steel (abst.), - 1, 560; 4, 165
Iron, determination of, in aluminum, 18, 768: electrolytic, 18, 654: in
ores, Zimmermann-Reinhardt method for, 17, 405: in organic mix-
tures (abst.), 1, 347: by permanganate in presence of hydrochloric acid (abst.), 6, 312: in phosphates, 17, 260: in phosphate rock, by
means of ammonium acetate, 18, 717: in phosphate rock, new
method for, 18, 271: volumetric, by means of hydrogen dioxide,
18, 918: volumetric, modification of permanganate method for,
19, 575: volumetric, in ores, 17, 878: volumetric, by means of stan- nous chloride, 15, 396: volumetric, by various methods, errors in
(abst.), 6, 242
Iron group, qualitative separation of metals of 17, 537
Iron manufacture, German economy in, 15, 284
Iron ores, determination of phosphorus in (abst.), 6, 193: determination of insoluble phosphorus in, 19, 614: determination of tita-
nium in (abst.), 4, 165: error in analysis of, due to presence of

chromium (abst.), 4, 166: method for complete analysis of, 19,
144: occurrence of vanadium in, P. 1, 84: titaniferous, analysis of
(abst.), 4, 164
Iron pyrites, synthesis of (abst.), 12, 155
Iron, separation of, from aluminum, 17, 931: (abst.), 7, 124: from ar-
senic, by hydrobromic acid gas, 20, 809: from arsenic, by hydro-
chloric acid gas, 18, 1040: from beryllium, 17, 688: from cobalt
(abst.), 1, 529: from gallium (abst.), 4, 168: from lanthanum, 20,
846: from manganese (abst.), 1, 325, 529, 533; 8, 277; 9, 10: from
nickel (abst.), 1, 529; 8, 277: from titanium, 16, 427; 20, 513: from
uranium, 20, 514: from zinc (abst.), 1, 529; 8, 277; 9, 9: from zir-
conium and allied metals, 20, 846
Iron and steel, committee on international standards for the analysis
of, 15, 448; 16, 140, 286: thermochemical study of, 19, 754; 20, 78:
standard methods for analysis of, 15, 501
Iron and steel, present possibilities in the analysis of (presidential ad-
3, 30
Iron, zinc, and magnesium, as reducing agents with ferric salts
(abst.), 4, 223
Irvingia from Cochin China, and the fatty matter contained (abst.), 8, 110
Isatin (abst.), 7, 57: characteristic reaction for (abst.), 1, 543: consti-
tution of (abst.), 7, 173
Isatoic acid (abst.), 7, 174
Isatoic acid, p-methyl-, and its derivatives (abst.), 7, 144
Isocyanide, presence of, in commercial benzene (abst.), 7, 29
Isodulcite (abst.), 9, 111
Isomeric compounds of the aromatic series, heat of neutralization of
(abst.), 8, 21
Isomerism of alcohols and acids, influence of, in the formation of esters
(abst.), 2, 182
Isonitroso. See Nitroso.
Isopurpurine, detection of (abst.), 2, 95: relation of, to anthrapurpu-
rine and flavopurpurine, 1, 184
Itaconic acid, new acid isomeric with (abst.), 5, 124
Jervine, chemistry of (abst.), 1, 553: pseudo-Jervine, chemistry of
(abst.), 1,554
Journals, chemical, abbreviations of titles of, 10, 152
Kaolins, American, composition of, 18, 909
Kekulé anniversary, 12, 80
Kent chemical laboratory, opening of, 16, 213
Kerosene oil, P. 1, 71: cause of diminishing flame in lamps fed with
inferior (abst.), 6, 29: determination of flashing point of (abst.), 5, 53, 245
Ketone, tolylmethyl- (abst.), 4, 206
Ketones, action of heat on (abst.), 8, 200: action of nitric acid on
(abst.), 4, 208: compounds of hydrazines with (abst.), 5, 239:
Friedel-Craft's synthesis of, from phenol ethers (abst.), 12, 227:
rieder-crares synthesis of, from phenor ethers (abst.), 12, 227.

heat of combustion of some (abst.), 6, 90: nitrogenized acids de-
rived from (abst.), 4, 208 Kidney bean, proteids of, 16, 633, 703, 757
Kidney bean, proteids of, 16, 633, 703, 757
Kieselguhr, technical applications of (abst.), 6, 140
Kjeldahl method for determination of nitrogen (abst.), 7, 179; 8, 81;
10, 45: behavior of nitrates in (abst.), 7, 290: digestion furnace for
(abst.), 7, 291: for compounds of the aromatic series, 7, 108: error
in, 13, 212: modification of (abst.), 7, 291; 8, 81; 11, 54: note on
Warington's modification of (abst.), 7, 291
Knorr's extraction apparatus, modification of, 16, 868
Kobellite, new variety of, 7, 194
Koettstorfer figure, method of determining, for dark-colored sub-
stances, 16, 408
Kola, caffeine compound in, 19, 63; 20, 34: methods of assay, discus-
sion of, 20, 74: nuts, analysis of (abst.), 4, 234
Laboratory devices, 16, 869
Lactates (abst.), 8, 275: influence of, on the digestion of albuminoids, 12, 394
Lactic acid, detection and determination of (abst.), 9, 16: preparation
of (abst.), 5, 20
Lactic acid, chlor-, formation of, from glyceric acid (abst.), - 1, 289
Lactometer tests, 13, 93
Lactometer, utility and reliability of, 10, 122
Lactoue of hydroxypropylmalonic acid (abst.), 4, 270: from levulinic
acid and formaldehyde, 15, 708: from pyrotartaric acid and form-
aldehyde, 15, 707
Lactone, a-ethylvalero-, etc. (abst. 1, 5, 100
Lactones, on the boiling-points of (abst.), 4, 271: formation of (abst.), 4, 271
Lactose. See Milk sugar.
Lactucone (abst.), 1, 158
Lamp, convenient, for generating formaldehyde gas and acetic alde-
hyde, 19, (11): gasoline, improvement on, 17, 337: Lilienfein's,
for low boiling petroleum (abst.), 6, 106; for monochromatic
flame, 15, 121
Lamp and candle for blowpipe, P. 2, 78
Lamps, cause of diminishing flame of (abst.), 6, 29
Lanolin (abst.), 8, 109
Lanthanum, separation of, from iron, 20, 846
Lanthanum molybdate, composition of, 17, 536: tungstate, composi-
tion and solubility of, 17, 533
Lard, analysis of, phosphomolybdic acid applied to, 17, 33: calori-
metric detection of adulterations in, 18, 174: detection of cotton-
seed oil in (abst.), 10, 115: detection of foreign fats in, 19, 796:
detection of rosin oil or paraffin oil in (abst.), 4, 192: examination
of, for impurities, 17, 723: microscopic detection of beef fat in,
of for impurities 17, 722' microscopic detection of beet fat in

Lards, compound, determination of solid fats in, 19, 51
Larderello, boric acid works, at, 16, 538
Lauth's violet and methylene blue, spectroscopic examination of, 6, 304
Lavoisier memorial, 19, 170
Law, Faraday's (abst.), 6, 156: Faraday's and Bouty's (abst.), 6, 126:
the perissad, 12, 426: of volumes, additions to the (abst.), - 1, 168
Lead, action of ammonium hydroxide on the haloid salts of, 6, 218:
action of petroleum on (abst.), 10, 92: and its alloys, action of
cold sulphuric acid on, 5, 219: and its alloys, action of sulphuric
acid at 100° on, 5, 224: alloys of, with tin, blowpipe reactions of,
P. 2, 108: alloys of, with tin, commercial valuation of, 16, 541:
alloys of, with tin, specific heat of (abst.), 8, 197: alloys of, with
antimony, arsenic and tin, 17, 869: alloys of, with antimony, com-
mercial valuation of, 16, 541: analysis of aragonite containing,
P. 2, 14: assay of, in the wet way (abst.), 7, 62: bismuth in, in
the manufacture of white lead, P. 1, 70: cause of discrepancies in
the estimation of silver in, P. 1, 67: detection of minute traces of,
by colorimetric method (abst.), 1, 87: electrolysis of pyrophos-
phate of (abst.), 12, 172: metallic, detection of silver in (abst.),
4, 168: spongy, reducing action of (abst.), 5, 233
Lead acetate, peculiar reaction with, 4, 213: chromate, preparation of
crystallized (abst.), 9, 110: chromate, preparation of crystallized
chromic acid from (abst.), 9, 222: compounds, aromatic (abst.),
10, 39: dioxide, action of, on haloid salts in the presence of acetic
acid (abst.), 5, 23: dioxide, action of hydrogen dioxide on (abst.),
2, 51: dioxide, preparation of, (abst.), 5, 51: halides and halo-
thiocyanates, on, 19, 820: iodide, on (abst.), 5, 120: oxide, action
of potassium hydroxide on (abst.), 4, 237: salts, decomposition of, by alkalies (abst.), 4, 237: sulphate, crystallized, see Anglesite:
sulphiodide, 17, 511: tetrachloride, derivatives of, 20, 815
Lead, determination of, in alloys, 20, 508: as iodate (abst.), 1, 535: in
lead ores, 19, 374: technical, 15, 548: volumetric,
4, 35; 17, 901; 18, 737; 19, 389
Lead pipe, action of waters on, P. 1, 66; 13, 176: (abst.),
2, 432; 9, 221; 10, 71
Lead poisoning by carbonated beverages, note on, 11, 99
Lead, separation of, from antimony, by hydrobromic acid gas, 20, 801:
from bismuth, 18, 1055: from bismuth, by hydrobromic acid gas,
20, 802: from bismuth, by hydrochloric acid gas, 18, 1034: from
mercury, electrolytic, 15, 101: from silver, electrolytic, - 15, 102
Leaden chamber process, mixing of gases in (abst.), - 4, 73
Leather refuse, the value of (as fertilizer), 18, 565
Lecithins of sugar-cane, 20, 113
Lecture experiment, action of water on bismuth iodide (abst.), 4, 142:
the condensation of gases (abst.), 2, 95
Lecture experiments, 12, 48: (abst.), 4, 205, 227

Legumelin, a proteid of most leguminous seeds, 20, 354, 415: proper-
ties of, 20, 415
Legumin, properties of, 20, 410: and other proteids of the pea and the
vetch, 18, 583
Leguminous plants, occurrence of citric acid in the seeds of (abst.), 7, 30
Lehigh Valley Section, meetings of,
17, (26), (44), (63); 18, (32); 19, (31); 20, (101)
Lemon juice, citric acid in (abst.), 10, 195
Lemon oil (abst.), 7, 247
Lentil, proteids of the, 20, 362, 410
Le Sueur process for the electrolytic production of sodium hydroxide
and chlorine, 20, 868
Leucocythemia, abnormal constituents of the blood due to, - P. 1, 2, 29
Leucomaines and ptomaines (abst.), 9, 114
Leucosin (from barley), 17, 541: (from malt), 18, 547: (from rye
kernel), 17, 432: properties of, 16, 528
Levulose, estimation of, in honey, 18, 81, 189: pure, preparation of
(abst.), 2, 133: synthesis of (abst.), 12, 165
Library, additions to, - 1, 39, 129, 311; 2, 2; 6, 4, 112, 147, 181, 280
Library, catalogue of books of, P. 2, 155
Licari kanali, essential oil of (abst.), 4, 233
Light, action of, on soluble iodides, 2, 249: influence of, on chemical
processes (abst.), 1, 93: influence of, on decomposition of iodides, 1, 65
Lignification, on the chemistry of (abst.), 5, 91
Lignone chloride from wheat fiber, 19, 296
Lime, determination of, by photometric method, 18, 665
Lime juice, determination of nitric acid in (abst.), - 1, 367
Lime mud, conversion of, into cement (abst.), 10, 91
Lime, pyrolignate of. See Calcium acetate, crude.
Lime, quick-, determination of calcium oxide in, 16, 721: technical
valuation of (abst.), 1, 559
Linoleic acid (abst.), 8, 185, 230
Linseed oil, adulteration of (abst.), 8, 28
Liquefaction of gases, electrolytic method of (abst.), - 10, 78
Liquids, determination of specific gravity of (abst.), 2, 171: some
thoughts about, 18, 724
Liquor, Chinese, analysis of, 7, 243
Liquors, alcoholic, examination of (abst.), 12, 503: spirituous, limits
of fused oil in (abst.), 9, 17
Liskeardite (abst.), 5, 97
Lithium, determination of, in mineral waters, 12, 214: errors in deter-
mining, as phosphate (abst.), 1, 106, 335: separation of, as fluoride
(abst.), 10, 193
Lithium bromoselenate, 20, 570: chloride, compounds of, with alco-
hols (abst.), 2, 135: picrate (abst.), 1, 286: salts, volatility of,
19, 156: sulphate, heat of solution of (abst.), 7, 52: trinitride, - 20, 226
Lithographic stones, American, 14, 376

Litinus, note on, P.	-,	79
Lophine, constitution of (abst.), 4, 225;	5,	91
Lubricant for glass stop-cocks, 20, 678: preparation of (abst.), 8, 109:		
for wire drawing (abst.),	8,	275
		265
		247
Lupin seeds, proteids of, 18, 622; I		
Lupinin, action of sodium on (abst.), 5, 17: anhydro- (abst.),	5,	17
w		247
Lutidine of coal tar (abst.), 6, 36, 82: a new (abst.), 12, 233: and		
	4,	272
		182
		715
Magnesia, action of, in expelling ammonia from salts and amines	,	, 0
(abst.), 6, 27: displacement of ammonia by (abst.), 9, 99: use of,		
	ο,	85
	8,	64
Magnesium, action of, upon manganous salts, 16, 822: atomic weight	-,	04
of, 19, 363: delicacy of test with sodium phosphate for (abst.), 1,		
96: precipitation of, as oxalate (abst.), 1, 528: reducing action of,		
16, 833: reduction of oxygen compounds by (abst.), 12, 152: sep-		
aration of, from alkalies as oxalate (abst.), 1, 529: volumetric de-		
termination of (abst.), 1, 564: zinc, and iron, as reducing agents		
	4,	223
Magnesium amalgam, reductions with, 17, 789: basic acetate (abst.),		
5, 19: carbonate, solubility of, in carbonic acid water (abst.), 7,		
114: chloride, compounds of, with alcohols (abst.), 2, 135: chlo-		
ride, manufacture of chlorine from (abst.), 9, 224: chloride, vola-		
tility of, 19, 156: hydrosulphide as a source of hydrogen sulphide		
(abst.), 6, 311: nitride, production of, by smothered combustion		
(abst.), 6, 311: nitride, production of by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: py-		
(abst.), 6, 311: nitride, production of by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5,		
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	7,	52
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	7,	52
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	ı,	492
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	ı,	
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	ı,	492
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	ı, ı,	492
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	ı, ı,	49 <b>2</b> 58
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	ı, ı,	49 <b>2</b> 58 948
(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),	I, I, 0, 4, 2,	49 <b>2</b> 58 948 263
<ul> <li>(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),</li> <li>Magnesium group, volume constitution of sulphates, selenates, and chromates (abst.),</li> <li>Magnetites, American, occurrence of vanadium in, - P. Maize, albuminoids of, 14, 313: investigations upon, 12, 369: the oil of, 2</li> <li>Malates, optical rotation of (abst.),</li> <li>Maleic acid from α-dibrompropionic acid (abst.),</li> <li>Maleic and fumaric acids, contributions to the knowledge of (abst.),</li> </ul>	I, I, 0, 4, 2,	49 <b>2</b> 58 948 263
<ul> <li>(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),</li> <li>Magnesium group, volume constitution of sulphates, selenates, and chromates (abst.),</li> <li>Magnetites, American, occurrence of vanadium in, - P. Maize, albuminoids of, 14, 313: investigations upon, 12, 369: the oil of, 2</li> <li>Malates, optical rotation of (abst.),</li> <li>Maleic acid from α-dibrompropionic acid (abst.),</li> <li>Malic acid from α-dibrompropionic acid (abst.), 2, 172: formation of</li> </ul>	I, I, 0, 4, 2,	49 <b>2</b> 58 948 263
<ul> <li>(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),</li> <li>Magnesium group, volume constitution of sulphates, selenates, and chromates (abst.),</li></ul>	I, I, O, 4, 2, I,	49 <b>2</b> 58 948 263
<ul> <li>(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),</li> <li>Magnesium group, volume constitution of sulphates, selenates, and chromates (abst.),</li> <li>Magnetites, American, occurrence of vanadium in, - P. Maize, albuminoids of, 14, 313: investigations upon, 12, 369: the oil of, 2</li> <li>Malates, optical rotation of (abst.), 2</li> <li>Maleic acid from α-dibrompropionic acid (abst.),</li> <li>Maleic acid from α-dibrompropionic acid (abst.),</li> <li>Malic acid from α-dibrompropionic acid (abst.),</li> <li>Malic acid from α-dibrompropionic acid (abst.),</li> <li>17: inactive, splitting up of</li> </ul>	1, 1, 0, 4, 2, 1,	492 58 948 263 172 236
<ul> <li>(abst.), 6, 311: nitride, production of, by smothered combustion of magnesium in air, P. 1, 2, 17: oxychlorides (abst.), 4, 230: pyrophosphate, estimation of phosphoric acid as, 4, 135: (abst.), 5, 243: sulphate, heat of solution of (abst.),</li> <li>Magnesium group, volume constitution of sulphates, selenates, and chromates (abst.),</li> <li>Magnetites, American, occurrence of vanadium in, - P. Maize, albuminoids of, 14, 313: investigations upon, 12, 369: the oil of, 2</li> <li>Malates, optical rotation of (abst.),</li></ul>	1, 1, 4, 1,	492 58 948 263 172 236

5, 237: electrolysis of (abst.), 2, 431: note on (abst.), 1, 494: prep-
aration of (abst.), 1, 385; 2, 435
Malonic acid, allyl-, behavior of, with sodium hydroxide, 17, 1: allyl-,
action of bromine on (abst.), 4, 271: chlor-, and its derivatives
(abst.), 4, 270: heptyl-, and heptylacetic acid, 5, 10: hydroxy-
propyl-, and its lactones (abst.), 4, 270: nitroso-, constitution of
(abst.), 5, 131 Malt, analysis of, 16, 353, 559: and barley, nitrogenous constituents
of (abst.), 6, 173: oil of, note on, 7, 22: the proteids of, - 18, 542  Manganate, potassium, and some of its analytical uses (abst.), - 9, 119
Manganese, action of hydrogen dioxide on (abst.), 10, 193: the actual
accuracy of determinations of, 18, 808: in the ash of wheat, P. 2,
141: basic salts of (abst.), 4, 242: electrolysis of pyrophosphate of
(abst.), 12, 170: electrolytic separation of, from other metals
(abst.), 12, 173: existence of, in wines (abst.), 6, 200: precipita-
tion of, by means of bromine vapor (abst.), 5, 244
Manganese amalgam (abst.), 1, 276: dioxide, action of, on haloid salts
in presence of acetic acid (abst.), 5, 23: dioxide, action of hydro-
gen dioxide on (abst.), 2, 51: dioxide, notes on (abst.), 2, 344: di-
oxide of the Weldon process, composition of (abst.) 2, 96: ferro-
cyanide, 18, 1100; 19, 542, 547; higher oxides of, and their hy-
drates (abst.), 4, 168: an oxide of, soluble in water (abst.), 9, 99:
palladium bromide, 16, 468: precipitated dioxide of, note on, 15,
114: salts, action of ozone on (abst.), 4, 234: silicated chloride of
(abst.), 6, 76
Manganese and chromium compounds corresponding to potassium
ferri- and ferro-cyanides (abst.), 7, 140
Manganese, determination of, in aluminum alloys, 18, 774: in alloys
of iron (abst.), 1, 83: in cast and spiegel iron (abst.), 6, 242: in
iron ores, 18, 385: in iron and ores, by use of hydrofluoric acid,
20, 504: in iron and steel, 19, 104: in manganese bronze, 15, 414:
methods for, 17, 341: notes on Särnström's method of, 19, 139: as
pyrophosphate, P. 1, 215: in steel, apparatus for colorimetric, 19,
286: in steel, sources of error in, 18, 498: volumetric, 17, 943; 18,
228: (abst.), 1, 329; 7, 91: volumetric, by precipitation as dioxide (abst.), 1, 327
(abst.), 1, 327 Manganese, separation of, from aluminum and iron (abst.), 1, 325:
from aluminum and iron, as oxalate (abst.), 1, 529: from iron
(abst.), 1, 533; 9, 10: from iron and nickel, 8, 277: from nickel
and zinc, 8, 277: from tungsten, 10, 1053: from zinc, - 1, 327; 8, 277
Manganous hydroxide, oxidation of (abst.), 2, 96: salts, action of mag-
nesium upon, 16, 822
Mannan, 18, 219
Mannide (abst.), 5, 120
Mannitol, heat of solution of, in water, 18, 156: second anhydride of
(abst.), 6, 38
Mannose and levulose, synthesis of (abst.), 12, 165

Manure, value of ferrous sulphate as (abst.), 6, 77
Manures, natural and artificial (abst.), 10, 47
Manures, natural and artificial (abst.), 10, 47 Maple sugar and syrup, composition of (abst.), 7, 92 Marienbad spring water, analysis of (abst.), 2, 135 Marine oils, analysis of, 11, 155
Marienbad spring water, analysis of (abst.), 2, 135
Marine oils analysis of
Marsh's test for arsenic (abst.), 12, 353, 477: quantitative determina-
Marsh's test for arsenic (abst.), 12, 353, 477. quantitative determina-
tion of antimony according to (abst.), 12, 470
tion of antimony according to (abst.), 12, 476 Maumené's test for oils (abst.), 8, 108 Maximum work, principle of (abst.), 7, 138
Maximum work, principle of (abst.), 7, 138
Maysin, a proteid of maize kernel, composition and properties, - 19, 527
Measuring apparatus for reagents, 19, 282  Medals, alchemical, exhibition of, 13, 30
Medals alchemical exhibition of
Mostings govern of American Chamical Cociety of American Chamical
Meetings, general, of American Chemical Society, 15, 177; 16, 73, 575,
(3); 17, (5), (51); 18, (7), (101); 19, (1), (51); 20, (7), (87)
Meetings of the Sections. See names of various sections.
Mellitose in cotton-seed (abst.), 7, 30: notes on (abst.), 12, 71
Melting-point of alloys, apparatus for determination of (abst.), 4, 263:
apparatus for determination of (abst.), 4, 169; 8, 278; 12, 226: of
butter, determination of (asst.), 4, 109, 6, 276, 12, 220. of
225: of fats (abst.), 8, 86: of fats and fatty acids (abst.), 8, 65:
method for determination of (abst.), 1, 375
method for determination of (abst.), 1, 375  Menthene, transformation of terpilene into a (abst.), 10, 191
Menthol, American, observations on, 14, 149: action of carbon disul-
phide on (abst.), 12, 161: and some derivatives (abst.), 4, 144: ox-
idation of, by potassium permanganate (abst.), 6, 164
Mercuric chloride, action of heat on (abst.), 4, 225; chloride, reactions
of (abst.), 4, 238: chlorothiocyanate, 18, 906: cyanide, decomposi-
tion of, by dilute acids, 1, 556: iodide, solubility of, in fatty com-
pounds (abst.), 8, 40: oxide, action of allylene on (abst.), 6, 167:
oxide and salts, action of acetylene hydrocarbons on (abst.), - 6, 93
Mercurous iodide and bromide, crystallized (abst.), 9, 209
Mercury, action of sulphuric acid upon, 19, 873; 20, 100: atomic
weight of, 19, 365: atomic weight of, electrolytic determination
of, 18, 1003: decomposition of sulphuric acid by, 20, 515: deter-
mination of (abst.), 12, 17: determination of, by titration with
ammonium thiocyanate (abst.), 1, 323: determination of, in cin-
nabar, electrolytic, 18, 96: double salts formed by haloid salts of
(abst.), 4, 208: double salts of (abst.), 4, 231, 232: electrolysis of
pyrophosphate of (abst.), 12, 171: electrolytic estimation of, 18,
169: (abst.), 1, 99: haloid salts of, decomposition of (abst.), 4,
233, 234: improved apparatus for distillation of (abst.), 1, 376: ores
of, blow-pipe assay of (abst.), 1, 370: purification of (abst.), 1,
292, 377, 378: separation of, from antimony, arsenic and tin, 15,
205: separation of, from bismuth, 15, 28: separation of, from bis-
muth, copper, and lead (abst.), 9, 12: separation of, from bismuth
and lead, 15, 101: separation of, from copper, 16, 423: separation
and lead, 15, 101; separation of from copper, 16, 422; separation

of, from palladium (abst.), 9, 12: sublimation of (abst.), 8, 20:
vapor of, reagent for (abst.), 1, 336
Mercury, ammoniacal compounds of, contributions to the knowledge
of (abst.), 1, 259: fulminate, chemistry of (abst.), 7, 122: fulmi-
nate, derivatives of (abst.), 7, 80: haloid salts, emission spectra of
(abst.), 1, 374: haloid salts, thermochemistry of double decompo-
sitions of (abst.), 4, 233, 234: oxychlorides and oxybromides,
thermochemical study of (abst.), 6, 127
Mesitylenephthaloylic acid (abst.), 5, 18
Mesitylenesulphuric acid, products of fusion of, with potassium hy-
droxide (abst.), 1, 252
Metal work, ancient, composition of (abst.), 4, 171
Metals, electrolytic separation of, notes on, 13, 140: molecular struc-
ture of (abst.), 5, 21: precious, divining the presence of, 19, (23):
separation of, by hydrobromic acid gas, 20, 797: separation of, by
hydrochloric acid gas, 18, 1029: spectroscopic examination of the
vapors obtained by heating some (abst.), 6, 232: use of pyrophos-
pliate double salts for determining, by electrolysis (abst.), 12, 168:
vaporization of, in vacuo (abst.), 4, 242
Metallic compounds containing bivalent hydrocarbon radicals (abst.),
4, 258: fragments from Peruvian sepulchres, analyses of (abst.),
I, 276: hydroxides, compounds of, with iodine, 19, 333: hydrox-
ides, dehydration of, by heat (abst.), 9, 189: phosphides (abst.),
I, 168: reducing agents, contribution to knowledge of, 16, 833:
salts, compiled data on the action of heat on, 5, 135: sulphides,
action of ammonium salts on (abst.), 1, 331
Metalloids, behavior of chlorosulphonic acid with (abst.), - 4, 261
Metallurgy, history of electric heating applied to, 18, 287
Metatitanic acid, 13, 210
Meteorite, Carcote, analysis of (abst.), 12, 155: Zsadányer, results of
analysis of (abst.), 1, 86
Methane, aromatic derivatives of (abst.), 4, 202: determination of, by
explosion, in technical analysis, 20, 343: and hydrogen in the at-
mosphere, 17, 801: and hydrogen, determination of, by explosion,
Methyl carbonate, heat of combustion of (abst.), 6, 90: chloride, den-
sity and coefficient of expansion of (abst.), 1, 271: chloride and
toluene in presence of aluminum chloride, hydrocarbons formed
from (abst.), 1, 280, 398: cyanide (abst.), 2, 433: cyanide, prop-
erties of mixtures of, with metyl and ethyl alcohols (abst.), 2, 430:
formate, preparation of (abst.), 1, 389: iodoform (abst.), 10, 114:
sulphate and methylsulphuric acid (abst.), 1, 492: violet test pa-
per, 4, 31
Methyl alcohol, acetone in (abst.), 10, 195: determination of, in wood
spirit (abst.), 1,579: from the dry distillation of colophony (abst.),
5, 123: preparation of pure (abst.), 1, 389
Methylamine, identical with mercurialine (abst.), I, 100: bromosele-

nate, 20, 572: carbonate, influence of temperature and pressure in		
the action of potassium chloride on (abst.),	9,	103
Methylamines, action of alkyl chlorides on (abst.),	8,	95
Methylaniline, action of nitrous anhydride upon, 13, 111: coloring		
matters derived from (abst.),	I,	273
Methylanthranol, amido- (abst.),	5,	241
Methylated diethyleneamines (abst.),	2,	223
Methylbenzoyl, direct chlorination of (abst.),	8,	167
Methyl-pseudo-chlorisatin from m-chlorquinolinemethyl chloride		
(abst.),	7,	229
Methylcrotonic and angelic acids, contributions to the history of		
(abst.),	ı,	396
Methyldiacetoneamine (abst.),	2,	175
Methylene, commercial, determination of methyl alcohol in (abst.),	I,	486
Methylene blue (abst.), 6, 86: and Lauth's violet, spectroscopic ex-		
amination of,	6,	304
Methylene chloride, action of, on toluene and benzene (abst.), 6, 163:		•
chloride, preparation of, 1, 522: chloriodide, note on (abst.),	7,	214
Methylene, diethoxy-,		522
Methylformyl-o-amidochlorbenzoic acid from m-chlorquinolinemethyl		0
chloride (abst.),	7.	229
α-Methylhydroxysuccinic acid (abst.),		342
p-Methylisatoic acid and its derivatives (abst.),		144
Methylketole, an isomer of skatole (abst.),		174
Methylmorphine hydroxide (abst.), 2, 98: iodide, action of potassium		
Methylmorphine hydroxide (abst.), 2, 98: iodide, action of potassium ferrocyanide on (abst.),	2,	98
ferrocyanide on (abst.),		98 132
ferrocyanide on (abst.), Methylpropylcarbinol, active, and fungi which destroy it (abst.),	2,	132
ferrocyanide on (abst.), Methylpropylcarbinol, active, and fungi which destroy it (abst.), Methylsulphuric acid and methyl sulphate (abst.),	2, I,	132 492
ferrocyanide on (abst.), Methylpropylcarbinol, active, and fungi which destroy it (abst.), Methylsulphuric acid and methyl sulphate (abst.), Methyltoluidine, coloring matters derived from (abst.),	2, I, I,	132 492 273
ferrocyanide on (abst.),	2, I, I,	132 492 273 175
ferrocyanide on (abst.),	2, 1, 1, 2, 6,	132 492 273 175 164
ferrocyanide on (abst.),	2, I, I, 2, 6, I,	132 492 273 175 164 126
ferrocyanide on (abst.),	2, 1, 1, 2, 6, 1,	132 492 273 175 164 126 245
ferrocyanide on (abst.),	2, 1, 2, 6, 1,	132 492 273 175 164 126 245 77
ferrocyanide on (abst.),	2, 1, 2, 6, 1, 5, 7,	132 492 273 175 164 126 245 77 84
ferrocyanide on (abst.),	2, 1, 2, 6, 1, 5, 7,	132 492 273 175 164 126 245 77
ferrocyanide on (abst.),	2, 1, 1, 2, 6, 1, 5, 7,	132 492 273 175 164 126 245 77 84 584
ferrocyanide on (abst.),	2, 1, 1, 2, 6, 1, 5, 7,	132 492 273 175 164 126 245 77 84
ferrocyanide on (abst.),	2, 1, 1, 2, 6, 1, 5, 7, 0, 1,	132 492 273 175 164 126 245 77 84 584
ferrocyanide on (abst.),	2, 1, 1, 2, 6, 1, 5, 7, 0, 1,	132 492 273 175 164 126 245 77 84 584
ferrocyanide on (abst.),	2, I, I, 2, 6, I, 5, 7, 0, I, I,	132 492 273 175 164 126 245 77 84 584
ferrocyanide on (abst.),	2, I, I, 2, 6, I, 5, 7, 0, I, I,	132 492 273 175 164 126 245 77 84 584
ferrocyanide on (abst.),	2, I, I, 2, 6, I, 5, 7, 0, I, I,	132 492 273 175 164 126 245 77 84 584
ferrocyanide on (abst.),	2, I, I, 2, 6, I, 5, 7, 0, I, I,	132 492 273 175 164 126 245 77 84 584
ferrocyanide on (abst.),	2, I, I, 2, 6, I, 5, 7, 0, I, I,	132 492 273 175 164 126 245 77 84 584

Milk, determination in, of albumin, 16, 712: of casein, 15, 635: of fat, 10, 32: (abst.), 1, 358; 8, 61, 61; of fat, optical estimation (abst.), 1, 570: of fat, relative merits of the Wanklyn and the Adams method for 12, 488: of milk sugar, 18, 428, 1111: (abst.), 8, 205: of protein compounds (abst.), 9, 48: of solids (abst.), 1, 357: of water (abst.), 1, 358; 4, 188; 8, 232  Milk of elephant, composition of, 3, 55; 4, 157: goat's, addition of, to cow's milk (abst.), 8, 233: human, composition and methods of analysis of, 6, 252: human, contribution to the study of (abst.), 9, 113: influence of sterilization upon, 13, 34: nitrates and nitrites as evidence of adulteration of (abst.), 9, 13: in the Paris hospitals (abst.), 8, 62: porpoise, composition of (abst.), 7, 290: porpoise, fat of (abst.), 8, 184: preserved, alterations of (abst.), 5, 28: proteids of, 13, 72: skim-milk, and whey, comparative
study of, 15, 347
Milk and butter, determination of solids and fat in (abst.), - 10, 27
Milk and urine of herbivorae, estimation of nitrogen in (abst.), - 8, 279
Milk ripener and purifier (abst.), 8, 43 Milk sugar, determination of, in milks, 18, 428, 1111: determination of
in milk (abst.), 8, 205: determination of mixtures of, with cane-
sugar (abst.), 7, 149: examination of (abst.), 7, 85: existence of
the proximate constituents of, in plants (abst.), 8, 62: partial
synthesis of (abst.), 2, 89
synthesis of (abst.), 2, 89 Mineral group from York, Pa. (note), 15, 543
Mineral water from Irondale, W. Va., analysis of, 6, 123
Mineral waters, determination of lithium in, 12, 214: from northwes-
tern Pennsylvania, analyses of, 18, 915: from Texas, analysis of, 11, 141
Minerals, action of sulphur monochloride on, 20, 289: behavior of, in
hydrobromic acid gas, 20, 809: carbon, analyses of, 13, 143:
humite, examination of (abst.), 7, 226: and rocks, microchemical
analysis of (abst.), 1, 95: Spanish, analyses of (abst.), - 2, 43
Mint, United States, smelting furnace of, 7, 159
Models for illustrating relationship between gas volumes and molec-
ular weights,       -       -       -       -       -       -       -       15, 542         Mohr's burette, modification of,       -       -       -       -       -       -       3, 124
Moisture remaining in gases dried by means of phosphorus pentoxide
(abst.), 10, 67: retained by gases dried by means of sulphuric
acid (abst.), 7, 295: in a soil, physical effects of salts and fertil-
Molasses, spontaneous combustion of, 19, 538
Mold, influence of vegetable, on the nitrogenous content of oats, - 19, 605
Molding sand, analysis of a, 17, 502
Morecular refraction of terpenes (abst.), 4, 173: rotation, synthesis of
bodies possessing (abst.), 6, 74: structure of the metals (abst.),
5, 21: volume of salt solutions (abst.), 6, 48: volumes of some
double ablamides (abot ) 6 cast maint of liquide determined by

means of surface tension, 18, 514: weights of some carbon com-
pounds, 20, 546
Molecule, determination of number of atoms in (abst.), 6, 47
Molybdate, ammonium, a modified solution of, 18, 445
Molybdates, complex (abst.), 1, 111: of rare earths, - 17, 483, 520
Molybdenum, action of carbonyl and sulphur chlorides upon, 15, 206:
atomic weight of, 15, 397; 16, 184; 18, 207: chemical behavior of,
17, 381: compounds, reduction of (abst.), 5, 51: separation of,
from tungsten, 19, 242
Molybdenum carbide, 17, 421: dioxide, action of, on silver salts,
16, 569: hexachloride, attempt to prepare, 16, 577: trioxide, action
of phosphorus pentachloride upon, 16, 425: trioxide, chemical
behavior of, 17, 381
Molybdenyl chloride, action of ammonia gas upon, 15, 61
Molybdic acid, action of haloid acids upon, 15, 18: determination of
phosphorus by means of, P, 1, 167: on a hydrate of (abst.), 5, 118:
reaction of, with potassium chromate and dichromate, - 16, 565
Monazite sand, analysis of, 18, 782
Mond and Tyrer, banquet to, 17, 997
Monochromatic flame, lamp for,15, 121
Morphine, action of benzoyl chloride on (abst.), 2, 98: action of potas-
sium ferricyanide on (abst.), 2, 97: action of potassium perman-
ganate on (abst.), 2, 98: in ammoniacal solution, action of air
on (abst.), 2, 98: complex function of (abst.), 4, 76: determina-
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post mortem tests for, 16, 799: separation of, from fatty matters
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post mortem tests for, 16, 799: separation of, from fatty matters
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into pieric acid (abst.), 4, 76
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), - 10, 17  Muffle for incineration of sugar, 16, 151
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Museum, contributions to, 2, 66
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Museum, contributions to, 2, 66  Mustard, method for analysis of, 3, 130
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 6  Museum, contributions to, 3, 130  Mustard, method for analysis of, 3, 130  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 3, 130  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 2, 66  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221  Mustard oil glycolide (abst.), 2, 221
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 3, 130  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221  Mustard oil glycolide (abst.), 2, 221  Mustard oils, action of, on the amido acids (abst.), 7, 85: aromatic
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 2, 66  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221  Mustard oil glycolide (abst.), 2, 221  Mustard oils, action of, on the amido acids (abst.), 7, 85: aromatic bases isomeric with (abst.), 2, 93: preparation of (abst.), - 5, 26
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 2, 66  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221  Mustard oil glycolide (abst.), 2, 227  Mustard oils, action of, on the amido acids (abst.), 7, 85: aromatic bases isomeric with (abst.), 2, 93: preparation of (abst.), - 5, 26  Musts, examination of, for sugar and acid (abst.), 7, 63: of 1883, exam-
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 2, 66  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221  Mustard oil glycolide (abst.), 2, 221  Mustard oils, action of, on the amido acids (abst.), 7, 85: aromatic bases isomeric with (abst.), 2, 93: preparation of (abst.), - 5, 26  Musts, examination of, for sugar and acid (abst.), 7, 63: of 1883, examination of, for acids and sugar (abst.), 6, 243
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 2, 66  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221  Mustard oil glycolide (abst.), 2, 221  Mustard oils, action of, on the amido acids (abst.), 7, 85: aromatic bases isomeric with (abst.), 2, 93: preparation of (abst.), - 5, 26  Musts, examination of, for sugar and acid (abst.), 7, 63: of 1883, examination of, for acids and sugar (abst.), 6, 243  Muter's method for analysis of fats and oils, 15, 110
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 2, 66  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221  Mustard oil glycolide (abst.), 2, 221  Mustard oils, action of, on the amido acids (abst.), 7, 85: aromatic bases isomeric with (abst.), 2, 93: preparation of (abst.), - 5, 26  Musts, examination of, for sugar and acid (abst.), 7, 63: of 1883, examination of, for acids and sugar (abst.), 6, 243  Muter's method for analysis of fats and oils,
tion of, in opium, 7, 45; 10, 143: (abst.), 7, 33; 10, 45: fallacies of post-mortem tests for, 16, 799: separation of, from fatty matters (abst.), 9, 15: solubility of (abst.), 4, 76: transformation of, into picric acid (abst.), 4, 76  Mortar, on the hardening of, 16, 733  Mortars, ancient (abst.), 10, 158  Motor, hot air, for laboratories, 17, 494, 520  Mucate, antimonyl potassium (abst.), 6, 35  Mucic acid and saccharic acid, derivatives of (abst.), 10, 17  Muffle for incineration of sugar, 2, 66  Mustard, method for analysis of, 2, 66  Mustard oil, examination of (abst.), 8, 87: ethyl, new formation of (abst.), 2, 221  Mustard oil glycolide (abst.), 2, 221  Mustard oils, action of, on the amido acids (abst.), 7, 85: aromatic bases isomeric with (abst.), 2, 93: preparation of (abst.), - 5, 26  Musts, examination of, for sugar and acid (abst.), 7, 63: of 1883, examination of, for acids and sugar (abst.), 6, 243  Muter's method for analysis of fats and oils, 15, 110

Naphthalene, action of iodine on, at high temperatures (abst.), 4, 232:
action of phthalic anhydride on, in presence of aluminum chloride
(abst.), 1, 485: alpha- and beta-position in (abst.), 2, 94, 132: con-
stitution of some bromine derivatives of (abst.), 5, 91: and ben-
zene, compounds of, with antimony trichloride (abst.), 5, 60: and
benzhydrol, condensation of (abst.), 2, 369: derivatives of (abst.),
6, 87, 164: derivatives of, new syntheses of (abst.), - 7, 115
Naphthalene series, law of substitution in (abst.), - 4, 206
Naphthalene tetrachloride, action of water and silver hydroxide on 2, 205
Naphthalene, azo- (abst.), 7, 228: dinitro- (abst.), 2, 369
$\beta$ -Naphthalene, diazo-, action of, on phenols 6, 151
Naphthalenes, amido-, transformation of $\alpha$ - and $\beta$ -naphthol into
α-Naphthoic acid, nitro- (abst.), 7, 147
α-Naphthol and β-naphthol, transformation of, into amidonaphtha-
lenes (abst.), 4, 270
β-Naphthol, action of chloroform on (abst.), 4, 241: dihydric alcohol
derived from (abst.), 4, 77
Naplithol, chloro-, bromo-, and iodo-, action of aluminum chloride
upon (abst.), 8, 94: chloro-, from β-naphtholsulphonic acid (abst.),
4, 229: dinitro- $\alpha$ -, amine derivatives of, 19, 927: dinitro- $\alpha$ -, chlo-
rination of, 19, 927: dinitro- $\alpha$ -, salts of, with various metallic
bases, 19, 923: diphenyldiamido- (abst.), 2, 170
$\beta$ -Naphtholaldehyde (abst.), 5, 23
β-Naphtholsulphonic acid, dichlornaphthalene and chlornaphthol from
(abst.), 4, 229
Naphthoquinone (abst.), 2, 91: compounds of, with toluidine and ethyl-
aniline (abst.), 5, 19
Naphthoquinone, dichlor-, action of amines on (abst.), - 4, 265
Naphthylamine, compound of cenanthaldehyde with, 5, 2: diethyl-,
action of sulphuric acid on (abst.), 4, 201: diethyl-, preparation
of (abst.), 4, 200: dimethyl-, oxidation of (abst.), 2, 91
$\beta$ -Naphthylamine, action of diazo compounds on (abst.), 8, 22
Naphthylaminesulphonic acids, conversion of, into dichloronaphtha-
lene (abst.), 10, 42
α-Naphthylsulphonic acid, action of phosphorus pentachloride on
(abst.), 4, 228
Naphthylsulphuric acid (abst.), 4, 227
Narceine, iodides of, 16, 362: reaction of (abst.), 9, 177
Nebraska Section, meetings of, 18, (33), (68), (94); 19, (13), (25), (41), (66)
Neodidymium, separation of, from iron, 20, 846
Neodidymium niolybdate, composition and solubility of, 17, 532: tung-
to the state of th
Nonderiging tubes of colored glass for
Nesslerizing, tubes of colored glass for, 6, 121 Neutrality, indicator for (abst.), 5, 245

New York Section, meetings of, 17, (2), (38), (68); 18, (2), (28), (37),
(61), $(69)$ , $(72)$ , $(95)$ , $(120)$ , $(125)$ ; $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(17)$ , $(1$
(61), (64); 20, (5), (17), (32), (63), (82), (101), (108).
Niagara river water, aeration and composition of, 12, 449
Nickel, atomic weight of, 16, 182; 17, 207; 20, 165: decomposition of
(abst.), 10, 180: determination of, in aluminum alloys, 18, 773:
determination of, electrolytic, 18, 658: determination of, by pre-
cipitation of executorytic, 10, 050. determination of in pickel
cipitation as oxalate (abst.), 1, 327: determination of, in nickel-
steel, 16, 96; 16, 110; 17, 125: electrolysis of pyrophosphate of
(abst.), 12, 169
Nickel, separation of, from aluminum and iron, as oxalate, 1, 529: sep-
aration of, from arsenic, by hydrochloric acid gas, 18, 1042: sep-
aration of, from bismuth, electrolytic, 15, 104: separation of,
from cobalt (abst.), 4, 166; 7, 250: separation of, from iron and
manganese (abst.), 8, 277: separation of, from manganese and
zinc (abst.), 8, 277: separation of, from zinc (abst.), -
1, 332; 6, 288; 8, 277; 9, 9
Nickel amalgam (abst.), 1, 276: arsenares, formation and constitution
of two (abst.), 8, 49: chloride, action of hydrogen sulphide on
(abst.), 4, 240: chloride, compounds of, with aniline, etc. (abst.),
Nickeliferous pyrrhotite, constitution of, 14, 369
Nickelo-nickelic hydrate, 18, 901: oxide, formation of (abst.), - 1, 295
Nickel-steel, determination of nickel in, 16, 96; 17, 125
Nicotine, determination of, in tobacco, 2, 338: (abst.), 4, 195: and nico-
tinic acid (abst.), 2, 55
Nicotinic acid (abst.), 2, 55: from pyridine (abst.), 4, 176
Nile, the river, analyses of water of, 15, 34, 84
Niobite of the Iser mountains (abst.), 2, 171
Niobium oxide, reaction of carbon tetrachloride with, 18, 532
Niobium. See also Columbium.
Nitramidobenzenes, isomeric, action of sulphuric acid on (abst.), - 2, 95
p-Nitraniline, action of carbon bisulphide on (abst.), - 4, 264
Nitranilines, chlor- (abst.), 2, 57
Nitrates, action of, on alkaline sulphides (abst.), 6, 142: action of heat
on, 5, 162: action of hydrochloric acid gas upon, 17, 683: behavior
of, in Kjeldahl process (abst.), 7, 290: detection of, in potassium
chlorate (abst.), 9, 174: determination of, P. 2, 150: determina-
tion of, in potable water, P. 2, 5; 16, 122, 193: fermentation of
(abst.), 5, 117: modification of Gunning's method for determining,
18, 1102: reduction of, in soils (abst.), 5, 117, 118, 119: in water,
phenolsulphonic acid process for, 16, 72
Nitrates and nitrites, determination of, in water (abst.), 4, 163: as evi-
dence of adulteration of milk (abst.), 9, 13: reduction of, to am-
monia in water analysis (abst.), 4, 163
Nitrating under various conditions (abst.), 6, 300

Nitric acid, action of, on pentamethylbenzene (abst.), 10, 37: action
of, on phenylisocrotonic acid (abst.), 7, 87: action of, on sugar, 9,
45: apparatus for determining (abst.), 9, 217: behavior of, with
soda-lime (abst.), r, 100: new compounds of, with ammonia
(abst.), 4, 234: condensation of, 17, 576: determination of (abst.),
6, 240; 10, 192: determination of, as animonia (abst.), P. 2, 9: de-
termination of, by means of indigo, in water analysis (abst.),
1, 541: determination of, in lime juice (abst.), 1, 367: determina-
tion of, as nitric oxide (abst.), 1, 540; 4, 258: determination of,
in the presence of acids which mask its reactions (abst.), <b>6</b> , 239:
determination of, rapid (abst.), 7, 293: determination of, accord-
ing to Schulze-Tiemann (abst.), 12, 353: determination of, in soils
(abst.), 4, 258: determination of, volumetric (abst.), 7, 61: distilla-
tion of, 17, 580: distillation of, from sodium nitrate and sulphuric
acid, 13, 246: in healthy urine, and method for its determination,
P. 2, 98: loss of, in leaden chamber process, etc. (abst.), 4, 73:
oxidation of myristic acid with (abst.), 8, 205: titration of, for
hyponitric acid, P. 2, 149; 1, 18
Nitric and chloric acids, color reactions of; with certain aromatic
bodies, 19, 156: and hydrobromic acids, conversion of sulphides
into sulphates by means of (abst.), 6, 33: and nitrous acids, detec-
tion of (abst.), 7, 61
Nitric nitrogen produced by the pea, 20, 793 Nitric oxide, absorbents of (abst.), 4, 160: action of the copper-zinc
couple on (abst.), 5, 233: action of, on sulphur dioxide (abst.), 4, 72 Nitride, magnesium, production by smothered combustion of magne-
_
Sium in air, P. 1, 2, 17 Nitrides. See Hydronitric acid.
Nitrification (abst.), 7, 23: oxidation of iodine in the process of (abst.), 7, 287
Nitrifying organisms, effect of acidity on development of, - 18, 475
Nitriles, action of hydroxylamine on (abst.), 6, 160: action of organic
acids upon, 20, 648: and carboxylic acids from aromatic amines
(abst.), 6, 85: conversion of, into imides (abst.), 5, 123: from form-
anilide (abst.), 8, 74: preparation of, from amides, P. 2, 123:
produced in destructive distillation of beet root residues (abst.), 1, 277
Nitrites, action of heat on, 5, 170: determination of (abst.), 10, 85:
determination of, in water, 18, 21: in water, test for (abst.), - 4, 163  Nitrites and nitrates, determination of, in water (abst.), 4, 163: reduc-
tion of, to ammonia in water analysis (abst.), 4, 163  Nitro compounds of the aliphatic series, constitution of (abst.),
8, 202, 274: behavior of, towards liydrogen sulphide (abst.),
. 0 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2, 178: determination of nitrogen in (abst.), 7, 91 p-Nitro compounds, electrolytic reduction of, in sulphuric acid solu-
tion, 17, 855
Nitro derivatives of resorcinol (abst.), 5. 129
Nitro group in organic compounds, volumetric determination of,

Nitro acids derived from ketones (abst.), 4, 208: of fatty series, prep-
aration of (abst.), 2, 291
Nitrocamphor, isomeric with camphonitrophenol (abst.), 12, 71
Nitrocellulose, separation of, from nitroglycerol (abst.), 1, 366: soluble,
manufacture of, 17, 411
Nitrogen, ammoniacal, determination of, in soils (abst.), 6, 169: anal-
ysis of organic bodies containing (abst.), 2, 352: apparatus for
determination of, modified (abst.), 4, 160: atmospheric, assimila-
tion of, in cotton plant, 18, 425: atmospheric, assimilation of, a
correction, 16, 432: atmospheric, assimilation of, by plan's, 12, 145:
(abst.), 12, 72: atmospheric, fixation of (as cyanides, etc.),
11, 2, 31: atmospheric, fixation of, by soils, 8, 18; 10, 12: atomic
weight of, 19, 362: atomic weight of, determination of, 18, 1045:
chemistry of, as disclosed in the constitution of the alkaloids,
9, 128: chemistry of, literature on the, 9, 142: of coal, behavior of,
during destructive distillation (abst.), 5, 95: and copper, double
iodide of (abst.), 6, 34: density of, 16, 188; 20, 170: free, evolved
by fermentation (abst.), 4, 267: free, formation of nitrous acid and
ammonia from (abst.), 12, 350: and halogens, analysis of organic
substances containing (abst.), 1, 337: nitric, produced by the pea,
20, 793: solidification of (abst.), 7, 27: stereochemistry of mole-
cules containing (abst.), 12, 166
Nitrogen, determination of, in agricultural analysis (abst.), 1, 281, 351:
in aluminum, 18, 771: in coal and coke (abst.), 5, 95: by combus-
tion with calcium hydroxide (abst.), 6, 168: by Dumas' method,
apparatus for (abst.), 1, 375: error in, 20, 961: in explosive
ethereal nitrates (abst.), 1, 102, 542: in fertilizers (abst.), 1, 279;
9, 13: in fertilizers containing nitrates, 17, 567: (abst.), 1, 356: in
fertilizers, the Gunning method for, 16, 795: in guano (abst.),
r, 355: in horn, etc. (abst.), r, 542: by Kjeldahl method (abst.),
7, 179; 8, 81; 10, 45: by Kjeldahl method, in aromatic compounds,
7, 108: by Kjeldahl method, digestion furnace for (abst.), 7, 291:
by Kjeldahl method, error in, 13, 212: by Kjeldahl method,
modified (abst.), 11, 54: new method for (abst.), 8, 25: in milk
and urine of herbivora (abst.), 8, 279: in nitrates and nitro com-
pounds (abst.), 7, 91: in nitroglycerol (abst.), 1, 102: in organic
elementary analysis (abst.), 1, 254, 336, 542; 5, 243: in organic
elementary analysis, modification of Schiff's apparatus for (abst.),
r, 375: by Ruffle's method (abst.), 6, 96: in steel (abst.), r, 562:
safety tube for, 18, 227: in waters, 9, 162: in waters, beer, etc.,
(abst.), 4, 162
Nitrogen iodide (abst.), 1, 112: iodide, researches on (abst.), 6, 34:
monoxide, density of, 20, 170: oxides (abst.), 7, 200: oxides, esti-
mation of, as ammonia (abst.), 4, 160: oxides, heat of formation
of (abst.), 2, 433: tetroxide, behavior of, with sulphuric acid
(abst.), 4, 265: trioxide dissolved in carbon disulphide, action of,
upon various organic compounds, 12, 7, 54

Nitrogenous constituents of barley and malt (abst.), 6, 173: content
of oats, influence of vegetable mold on, 19, 605: principles of
vegetable soil (abst.), 9, 104
Nitroglycerol, detonating submerged, P. 1, 2, 2: determination of
nitrogen in (abst.), 1, 102: the manufacture of, 17, 263: separation
of, from nitrocellulose (abst.), 1, 366
Nitronaphthalenes, commercial preparation of, 19, 532
Nitrophenol, Fittica's fourth (abst.), 2, 371
Nitroprusside, sodium, preparation of, 19, 23
Nitrosaccharose, 4, 147: correction, 4, 186
<i>iso</i> -Nitroso compounds (abst.), 5, 65; 9, 195
Nitroso- <i>o</i> -cresol (abst.), 7, 55
Nitroso derivatives of aromatic diamines (abst.), 8, 55
Nitrosophenol, action of ammonia on (abst.), 7, 86: ethers of (abst.), 7, 87
Nitrophenols (abst.), 7, 230
Nitrosyl chloride, action of, on unsaturated hydrocarbons (abst.), 1, 170
Nitrous acid, action of, on resorcinol diethyl ether (abst.), 1, 161: and
ammonia, formation of, from free nitrogen (abst.), 12, 350: be-
havior of diamines with (abst.), 6, 162: detection of (abst.),
1, 105; 6, 288; 7, 61: estimation of, gasometric (abst.), 10, 67:
estimation of, in potable waters, etc., 1, 136: estimation of, volu-
metric (abst.), 6, 170: presence of, in the atmosphere (abst.), - 12, 69
Nitrous anhydride, action of, on glycerol (abst.), 5, 233: action of, on
organic compounds, 12, 7, 54; 13, 111: existence of, in form of
vapor (abst.), 4, 266
Nitrous oxide, determination of (abst.), 4, 160
Nomenclature and notation, report on, 8, 116: of alkaloidal salts 11, 130
Non-metals, action of, on alkaline selenocyanates (abst.), - 8, 179
North Carolina Section, meetings of, 18, (60), (97); 19, (22), (49); 20, (73)
North Eastern Section, meeting of, 20, (45)
North Sea expedition, results of Norwegian (abst.), - 1, 496; 2, 289
Norwegium (abst.), 2, 224: in American lead, 2, 213: atomic weight
and properties of (abst.), 1, 527: properties of (abst.), - 1, 398
Nux vomica, alkaloids of (abst.), 5, 95; 7, 116
Oat kernel, proteids of, 18, 621
Oats, influence of vegetable mold on the nitrogenous content of, - 19, 605
Octylbenzene, <i>p</i> -amido (abst.), 7, 176
Octyltoluene, amido- (abst.), 7, 176
Enanthaldehyde, compounds of with aniline, xylidine, and naphthyl-
amine, 5, 2: on the condensation products of (abst.), 5, 94: and
cenanthyl chloride, action of, on dimethylaniline in the presence
of zinc chloride (abst.), 9, 7
Enanthalaniline, cenanthalxylidine, and cenanthalnaphthylamine
Œnanthalaniline, cenanthalxylidine, and cenanthalnaphthylamine (abst.), 5, 66
CEnanthalaniline, cenanthalxylidine, and cenanthalnaphthylamine (abst.), 5, 66 (Enocyanine (abst.), 5, 119
Œnanthalaniline, cenanthalxylidine, and cenanthalnaphthylamine (abst.), 5, 66

Oil, almond, unreliability of test for (abst.), 8, 87: from artificial butter, specific gravity of (abst.), 4, 188: castor, products of oxidation of (abst.), 8, 110: castor, solid residue from the distillation of, in vacuo, 5, 4: cocoanut, relation of, to methods of butter analysis, 7, 188: cod liver, examination of (abst.), 10, 70: of corn, 20, 948: cotton-seed (abst.), 8, 206: cotton-seed, adulteration of, with tallow (abst.), 10, 86: creosote, estimation of phenol in (abst.), 6, 38: earth-nut, sensibility of, to heat when electrified (abst.), 10, 173: essential, of Licari kanali (abst.), 4, 233: essential, of Satureia hortensis, occurrence of carvacrol in (abst.), 5, 24: essential, of savory (Saturcia Montana) (abst.), 4, 77: of geranium, detection of adulterations in (abst.), 1, 105: Indian geranium (abst.), 12, 234: Japanese camphor (abst.), 6, 313: lemon (abst.), 7, 247: of malt, note on, 7, 22: mineral, detection of, in fatty oils and fuller's grease (abst.), 8, 38: mineral, detection of, in resin oil, 8, 65: mineral, purification of, with sulphurous acid (abst.), 8, 206: olive, adulteration of (abst.), 8, 40: distinction of, from cottonseed oil (abst.), 4, 192: olive, test for (abst.), 7, 250: petroleum, on explosions of, etc., P. I, 115: rosin, quantitative separation of, from mineral oils, 16, 385: sesame, detection of (abst.), 9, 177: see also, Kerosene; Turpentine.

Oil and fat, detection of hydrocarbons in (abst.), 8, 86: and moisture determination of, in linseed cakes, etc., - -Oil-cake, determination of fat in (abst.),

Oil-cakes used in feeding, contributions to study of, 15,656 Oil-gas, 16, 688; use of, in blast lamp (abst.),

Oils, action of, on polarized light (abst.), 9, 176: action of sulphur

chloride on (abst.), 10, 116: apricot, peach, and walnut (abst.), 8, 184: bromine and iodine absorption of (abst.), 8, 100: California vegetable, properties of, 17, 935: cereal, heat of combustion of, 20, 309: coefficient of expansion of (abst.), 8, 99: commercial, analysis of (abst.), 2, 433: containing unsaponifiable fats, examination of (abst.), 8, 39: determination of fatty acids in (abst.), 6, 100: determination of glycerol in (abst.), 8, 102, 104: determination of heat of bromination of, 18, 378: determination of sulphur in (abst.), 10, 44: essential, chemistry of (abst.), 7, 121: essential, constituents of some (abst.), 7, 121: essential, detection of adulterations of (abst.), 1, 368: essential, detection of alcohol in (abst.), 1, 582: essential, of some Ericeae, components of (abst.), 1, 395: essential, and terpenes (abst.), 7, 246: free fatty acids in (abst.), II, 55: fatty, detection of, in mineral oils (abst.), 7, 226: fatty, determination of glycerol produced by the saponification of (abst.), 8, 204: fatty, on the solidification of (abst.), 6, 198: fatty, solubility of iodine in (abst.), 7, 202: fixed, examination and chemistry of (abst.), 8, 98, 103: lubricating, analysis of, 15, 265: marine, analysis of, II, 155: Maumené's test for (abst.), 8, 108: mineral, detection of fat oils in (abst.), 8, 39: mineral lubricating,

agent for thickening (abst.), 8, 109: mineral, quantitative separa-
tion of rosin oil from, 16, 385: oxidation of (abst.), 8, 106: specific
gravity of (abst.), 8, 98: titration of, by means of hypobromite
solution (abst.), 6, 99: Valenta's acetic acid test for (abst.), 8, 101,
103: vegetable, examination of (abst.), 10, 70: viscosity of, instru-
ment for measuring, 15, 173, 454: viscosity of, method of deter-
mining (abst.), 7, 93; 8, 85: see also Mustard oils.
Oils and fats, analysis of (abst.), 10, 194: determination of solid fat in
18, 259: formation of basic salts in the saponification of (abst.), 8,
41: Koettstorfer figure of dark-colored, 16, 408: methods of test-
ing, 15, 153: Muter's method for analysis of, 15, 110: quantitative
estimation of (abst.), 6, 245
Oils and grease, improvements in bleaching or purifying (abst.), - 8, 43
Oleic acid, action of sulphuric acid on (abst.), 8, 85: conversion of,
into palmitic (abst.), 7, 64: oxidation of, by potassium perman-
ganate (abst.), 7, 207; 8, 42: quantitative separation of, from
stearic acid (abst.), 1, 360
Oleomargarine, detection of, 3, 83
Oleum cynae (abst.), 7, 122
Onions, analysis of, P. I, 2, 60
Opium, determination of morphine in, 7, 45; 10, 143: (abst.), 4, 194;
7, 33; 10, 45: separation of the alkaloids of (abst.), 9, 176
Opium alkaloids, solubility of (abst.), 9, 216
Optically inactive compounds, splitting of (abst.), 6, 90
Orange, bitter, proximate principles of (abst.), 8, 202
Orcinol, new isomer of (abst.), 4, 227: and some other dihydroxytol-
uenes (abst.), 5, 61
Ores, determination of sulphur in (abst.), 1, 560: zinc, analysis of, 11, 49
Organic acid obtained by the action of alcoholic potassium hydroxide
on a mixture of chloroform and acetone (abst.), 9, 102
Organic compounds, synthesis of, by electrolysis (abst.), - 4, 239
Organic matter, determination of, by oxidation in the wet way, 15, 71:
effect of decomposing, on natural phosphates, 14, 353: in fertili-
zers, oxidation of, by aqua regia, 17, 86: methods of estimating,
by reduction of potassium permanganate (abst.), 6, 41: in water,
differentiation of, 20, 497: in water, direct oxidation of, - 14, 233
Organization of the American Chemical Society, - P. 1, 3, 18
Orpine, peculiarities of commercial (abst.), 8, 97
Orsat's apparatus for estimation of oxygen (abst.), 6, 97
Orthodiketones, color reaction for (abst.), 8, 58
Orthosilicic acid, existence of, 19, 832
Osmotic pressure, 20, 579
Oxalate, acid ammonium, influence of, on the solubility of neutral
oxalate (abst.), 8, 71
Oxalic acid (abst.), 2, 430: action of, on chlorates, bromates, and
iodates (abst.), 1, 384: action of potassium permanganate upon,
P. 2, 153: formation of, in plants (abst.), 9, 7: oxidation of, by
-1 -, 155. Termation of, in plants (abst.), 9, 7. Oxidation of, by

cupric ammonium solution (abst.), 1, 490: produced in oxidation
of animal substances (abst.), 1, 106: reaction between, and ferric
salts (abst.), 8, 198: surface-tension of solutions of, 20, 129; syn-
thesis of (abst.), 5, 50: in vegetation (abst.), 8, 37
Oxalines and glyoxalines (abst.), 5, 19
Oxime, a new quinone-, 13, 111
Oxides, metallic, reduction of, at high temperatures, 20, 232: reduc-
tion of, in sunlight, 4, 3
Oxycellulose for the determination of vanadium (abst.), - 8, 78
Oxycelluloses, the natural, 18, 8
Oxydiphenyl bases (abst.), 10, 18
Oxygen, action of, upon zinc ethide (abst.), 12, 156: new absorbent
for (abst.), 7, 177: active (abst.), 4, 207: active, in barium dioxide,
determination of (abst.), 2, 132: active, production of (abst.),
5, 19: in air, apparatus for determining (abst.), 1, 585: atomation
of, 5, 205: atomation of, at elevated temperatures, 6, 17: atomic
weight of, 19, 360: compounds, reduction of, by magnesium
(abst.), 12, 152: density of, 16, 188; 20, 170: density and atomic
weight of, 18, 198: determination of atomic weight of (abst.),
6, 48: and the halogens, relative affinities of (abst.), 1, 280:
improved form of Orsat's apparatus for estimation of (abst.),
. 6, 97: some industrial application of (abst.), 10, 197: liquid, as a
cooling agent (abst.), 7, 27: nascent, conversion of carbon mon-
oxide into carbon dioxide by, 5, 78: preparation of, continuous
(abst.), 8, 21: relative affinity of, for hydrogen and carbon mon-
oxide (abst.), 1, 164: sulphur, and halogens, combined with hy-
drogen, reciprocal displacements of (abst.), 1, 385: volumetric
estimation of, by means of phosphorus (abst.), 1, 372: in water,
determination of (abst.), 2, 172
Oxymorphine, Schützenberger's (abst.), 2, 98
Oxyphenylacetic acid. See Phenoxyacetic acid.
Oxyphenylpropionic acid. See Phenoxypropionic acid.
Oxypropyltoluidine (abst.), 4, 206; 5, 29, 58
· · · · · · · · · · · · · · · · · · ·
Ozonator, 1, 8: new and powerful form of, 1, 431
Ozone, action of, on carbon monoxide, 1, 450: action of, on coloring-
matter of plants, 1, 228: action of, on manganese salts (abst.),
4, 234: action of, on organic substances, 1, 447: bleaching of
syrups by, 1, 229: constitution of (abst.), 18, 286: determination
of, in the air (abst.), 4, 162: efficiency of various means of pro-
ducing, 1, 431: and electricity, researches on (abst.), 1, 171: for-
mation of, during slow oxidation of phosphorus (abst.), 2, 351:
and hydrogen dioxide (abst.), 2, 34, 59, 147: and hydrogen di-
oxide both produced by action of air on moist phosphorus 3, 5:

duction of, 1, 8: production of, by heating substances containing
oxygen, 2, 411: relations between temperature and volume in
producing, 1, 8: researches on (abst.), 4, 235, 237: solubility of, in
water, 1, 220: thermochemistry of (abst.), 4, 266
Ozonization of air, products obtained in, 1, 145
Palissandre wood. See Rosewood.
Palladious chloride, carbamido- (abst.), 2, 137
Palladium, atomic weight of, 16, 184; 17, 208: behavior of, towards
carbon monoxide or hydrogen (abst.), 5, 62: separation of, from
mercury (abst.), 9, 12
Palladium double bromides, 16, 465: manganese bromide, 16, 468:
potassium bromide 16, 466, 467: sodium bromide, 16, 467: stron-
tium bromide, 16, 467
Palm nut meal, determination of fat in (abst.), 8, 28
Palm wine, composition of (abst.), r, 402
Pancreatic juice, action of, on starch and glycogen (abst.), - 1, 173, 273
Pansy, estimation of amount of salicylic acid in (abst.), - 6, 233
Papaverine, new test for (abst.), 1,545
Paper hangings, amounts of arsenic found in various, 2, 339
Paper pulp, preparation of (abst.), 5, 122
Parabanic series, new derivative of (abst.), 1, 487
Paraffin, facts about (abst.), 12, 157: specific gravity of (abst.), 5, 236:
use of, as absorbent of vapors of ether, chloroform, benzene, and
carbon bisulphide (abst.), 1,585
Paraffin oil, detection of, in lard (abst.), 4, 192: shale deposit, recent
discovery of, in Servia (abst.), 6, 244
Paraffins, new (abst.), 7, 66: preparation of (abst.), - 5, 130
Paraxanthine (abst.), 5, 65
Patent law, (English) as amended in 1883 (abst.), 6, 26: discussion of
preceding paper on (abst.), 6, 31
Patents, abstracts of American, relating to chemistry, I, 121, 177, 260,
306, 405, 457, 504, 590; 2, 66, 100, 138, 189, 227, 295, 353, 372, 402,
437, 457; 3, 63, 157; 6, 50, 107, 143, 176, 201, 246, 292, 314; 7, 34,
67, 94, 125, 151, 181, 215, 232, 252, 297; <b>8</b> , 29, 44, 66, 88, 111, 168,
185, 207, 234, 280; 9, 18, 39, 49, 78, 105, 124, 157, 178, 203, 225; 10,
29, 48, 73, 94, 118, 160; 12, 18, 50, 74, 121, 177, 236, 355, 416, 478,
505; 13, 66, 107, 127, 145, 171, 185, 218, 239, 255, 294; 14, 17, 36,
71, 117, 138, 160, 233, 287, 318, 381; 15, 48, 116, 179, 236, 355, 415,
475, 591, 711; 16, 67.
Patents, abstracts of foreign, relating to chemistry, 1, 117, 174, 296,
404, 455, 498, 587; 2, 68, 102, 141, 191, 230, 299, 355, 375, 405, 439,
459; 3, 70, 172; 4, 38, 78, 108.
Pea, production of nitric nitrogen by the, 20, 793: proteids of the,
18, 583; 20, 348, 410
Peas, split, adulteration of (abst.), 9, 38

Peach oil (abst.), 8, 184: kernel, proteids of the, 18, 613
Pegmatite from Hindustan, presence of diamonds in (abst.), - 6, 105
Pelagine, composition of, 17, 877
Penetration machine, the, an explanation, 17, 218
Pennant grits, composition of (abst.), 4, 144
Pentabrombenzenesulphonic acid (abst.), 2, 186
Pentaerythrol, 15, 706
Pentaglycerol, 15, 707
Pentamethylbenzene, action of nitric acid on (abst.), - 10, 37
Pentathionate, potassium, experiments on (abst.), 4, 224
Pentathionates, preparation of (abst.), 5, 233
Pentathionic acid (abst.), 4, 199: note on (abst.), - 5, 234
Pentosans, determination of, in food-stuffs, 19, 193: determination of
true, 19, 304: solubility of, in the reagents employed in the esti-
mation of starch, 20, 266: of wheat, 19, 292
Pentoses, not formed by assimilation process, 15, 618
Pepper adulterant, new (abst.), 10, 195: adulteration and analysis
(abst.), 10, 70
Peppermint oil and some of its derivatives (abst.), 4, 144: plants,
treatment and distillation of (abst.), 10, 117
Pepsin, insoluble modification of (abst.), 4, 237
Pepsin tests, relative value of, 10, 51
Peptones in blood and urine (abst.), 8, 231: chemical character of, and
separation from albumin (abst.), 10, 157: commercial, analysis of
(abst.), II, 55
Perchloric acid, as reagent for alkaloids (abst.), 1,545
Perchromic acid, new solvents for, 17, 41
Periodic function, atomic volume as a, 20, 935
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947:
Periodic function, atomic volume as a, 20, 935
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947:
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law. Periodicals, chemical, received by the American Chemical Society - 12, 510
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law. Periodicals, chemical, received by the American Chemical Society - 12, 510
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxida-
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxidation of quinine by, 1, 80: production of, by combustion of manga-
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxidation of quinine by, 1, 80: production of, by combustion of manganese, 18, 230: see also Potassium permanganate.
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxidation of quinine by, 1, 80: production of, by combustion of manganese, 18, 230: see also Potassium permanganate.  Permanganates, composition of the alkaline (abst.), - 8, 272
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxidation of quinine by, 1, 80: production of, by combustion of manganese, 18, 230: see also Potassium permanganate.  Permanganates, composition of the alkaline (abst.), - 8, 272 Pernitric acid, composition and molecular weight of (abst.), - 4, 237
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxidation of quinine by, 1, 80: production of, by combustion of manganese, 18, 230: see also Potassium permanganate.  Permanganates, composition of the alkaline (abst.), 8, 272 Pernitric acid, composition and molecular weight of (abst.), - 4, 237 Persian berries, coloring matter and glucoside sugar of (abst.), - 2, 62
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxidation of quinine by, 1, 80: production of, by combustion of manganese, 18, 230: see also Potassium permanganate.  Permanganates, composition of the alkaline (abst.), - 8, 272 Pernitric acid, composition and molecular weight of (abst.), - 4, 237 Persian berries, coloring matter and glucoside sugar of (abst.), - 2, 62 Persulphuric acid, formation of, by electrolysis (abst.), 2, 362: heat of
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxidation of quinine by, 1, 80: production of, by combustion of manganese, 18, 230: see also Potassium permanganate.  Permanganates, composition of the alkaline (abst.), - 8, 272 Pernitric acid, composition and molecular weight of (abst.), - 4, 237 Persian berries, coloring matter and glucoside sugar of (abst.), - 2, 62 Persulphuric acid, formation of, by electrolysis (abst.), 2, 362: heat of formation of (abst.), 2, 363
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 17, 856: oxidation of quinine by, 1, 80: production of, by combustion of manganese, 18, 230: see also Potassium permanganate.  Permanganates, composition of the alkaline (abst.), - 8, 272 Pernitric acid, composition and molecular weight of (abst.), - 4, 237 Persian berries, coloring matter and glucoside sugar of (abst.), - 2, 62 Persulphuric acid, formation of, by electrolysis (abst.), 2, 362: heat of formation of (abst.), 2, 363 Petrocene,
Periodic function, atomic volume as a, 20, 935 Periodic law, an early American arrangement of the elements, 17, 947: history of (abst.), 2, 225: modified arrangement of elements, 17, 75: see also Perissad law.  Periodicals, chemical, received by the American Chemical Society - 12, 510 Periodide of triphenylbrommethane, 20, 790 Periodides, the, 17, 775: of alkaloids, 20, 706: of atropine, 20, 329: of pyridine, 17, 859 Perissad law, 12, 426 Permanganate, lead oxalate for standardizing (abst.), 1, 586: oxidation of quinine by, 1, 80: production of, by combustion of manganese, 18, 230: see also Potassium permanganate.  Permanganates, composition of the alkaline (abst.), - 8, 272 Pernitric acid, composition and molecular weight of (abst.), - 4, 237 Persian berries, coloring matter and glucoside sugar of (abst.), - 2, 62 Persulphuric acid, formation of, by electrolysis (abst.), 2, 362: heat of formation of (abst.), 2, 363

alcohols obtained from (abst.), 6, 95: artificial production of,
15, 379: by-products, the nature of certain (abst.), 1, 277: crude,
three samples of, 13, 179: detection of aromatic compounds in
(abst.), 6, 95: determination of flashing point of (abst.), 5, 53:
determination of naphtha in, P. 1, 119: and its examination,
1, 188: inclusion of, in quartz crystals, 20, 795: Lilienfein's lamp
for low boiling (abst.), 6, 106: Ohio, 13, 168: Pennsylvania,
P. I, 91
Petroleum coke, substances contained in (abst.), 2, 435: oil, explo-
sions of, etc., P. 1, 115: oil, testing of, P. 1, 115: tar residues,
utilization of, by Rave's process (abst.), 10, 93
Pharmaceutical preparations made in United States, - 15, 566
utilization of, by Rave's process (abst.), 10, 93 Pharmaceutical preparations made in United States, - 15, 566 Phaselin, a proteid of the kidney bean, 16, 707, 757 Phaseolin, a proteid of the kidney bean, 16, 635
Phaseolin, a proteid of the kidney bean, 16, 635
Phenacetine, identification of, 17, 933
Phenanthraquinone (abst.), 2, 48: action of acetyl chloride on (abst.),
4, 221: action of aldehydes on (abst.), 4, 198: action of phos-
phorus chlorides on (abst.), 5, 69: condensation product of, with
ethyl acetoacetate (abst.), 5, 92
Phenanthrene, constitution of (abst.), 1, 395; 2, 45, 347: heat of solu-
tion of, 18, 153, 156
$\alpha$ - and $\beta$ -Phenanthrenecarboxylic acids (abst.), 2, 347
Phenanthrenedisulphonic acid and some derivatives (abst.), - 2, 367
Phenthrenesulphonic acid, a new, 2, 203
Phenol, action of allyl iodide on, in the presence of lime or aluminum
foil (abst.), 5, 234: action of nitrogen trioxide on, 12, 9: deter-
mination of (abst.), 4, 196: determination of, in crude carbolic
acid (abst.), 8, 79: determination of, in creosote oil (abst.), 6, 38:
determination of, volumetric (abst.), 1, 581: dye-stuffs from
(abst.), 7, 229: occurrence of, in the stem and leaves of Pinus
sylvestris (abst.), 6, 93: oxidation of, by means of nitrobenzene
(abst.), 7, 207: reagent for (abst.), 1, 339, 546: synthesis of homo-
logues of (abst.), 4, 205
Phenol, o-amido-, a new dye-stuff from (abst.), 1, 493: o-amido-, tri-
phenodioxazine by oxidation of (abst.), 12, 162: benzyl-, and its
derivatives (abst.), 4, 204: p-brom-o-amido- (abst.), 7, 246: chlor-
dinitro-, and an aniline derivative of $\alpha$ -chlordinitrophenol, P. 2,
111: o-cyano- (abst.), 10, 38: dichlorazo-, constitution of (abst.),
1, 493: nitro-, on a, called camphonitrophenol (abst.), 12, 71: 11i-
tro-, Fittica's fourth (abst.), 2, 371: nitroso-, a few ethers of
(abst.), 7, 87: perchlor-, from perchlorbenzene (abst.), 7, 228: tri-
bromo-, brominated (abst.), 7, 145
Phenols, action of diazoanisoïl chloride on, 5, 32, 55: action of diazo-
β-naphthalene on, <b>6</b> , 151: determination of, volumetric (abst.), 12,
477: high boiling, in coal tar (abst.), 7, 57, 120: polyhydric, heat
4//. mgn boning, in courtai (abst.), /, 5/, 120. porynyarie, neat

of neutralization of (abst.), 7, 119: substituted, oxidation of	
(abst.), 2, 223: thermochemical relations of (abst.), - 8,	34
Phenols, bromamido- (abst.), 7, 246: nitro-, brominated, benzyl ethers	
of and their behavior on reduction (abst.), 7, 245: nitroso-(abst.),	
6, 287; 7, 230: nitroso-, action of ammonia on (abst.), 7,	86
	100
	227
Phenolglucoside, synthesis of (abst.), 1, 403, 2,	
	496
	145
	170
	292
	296
Plienyl cyanate (abst.), 7, 174: mercaptide, sodium-, behavior of, with	
isobutylenebromide (abst.), 12, 229: mustard oil glycolide (abst.),	
	128
	348
Phenylacetylene, syntheses by means of (abst.), 4, 206: and its deriva-	
	176
	238
	243
	143
	159
	206
	85
	, 366
	267
	162
	543
Phenylhydrazine, action of benzal acetoacetic ester on (abst.), 8, 55:	0.0
	235
	87
	366
Phenylmesitylenecarbinol and its principal ethers (abst.), - 8	
	, 143
	, 87
	, 226
Phloroglucin, action of chlorine on (abst.), 12, 159: isomers of (abst.),	
	, 338
	176
Phosphate, alum-, baking powders 12,	452
Phosphates, action of heat on, 5, 173: alkaline, behavior of, towards	
some indicators (abst.), 5, 53: aromatic, preparation of (abst.), 5,	
18: decomposition of, by sodium acid sulphate, 7, 238; 8, 32:	
determination of iron and alumina in, 17, 260; natural, effect of	
decomposing organic matter on, 14, 353: reversion of (abst.), 2,	
Tail 122: reverted determination of 4 via (abot ) 4 ages age	

also Superphosphates.
Phosphatic slags, mechanical analysis of, 19, 19
Phospliides, metallic (abst.), 1, 168
Phosphine, action of, on carbon bisulphide (abst.), 2, 171: combina-
tions of, with chloral hydrate (abst.), 8, 199: combinations of,
with cuprous chloride (abst.), 1, 386: determination of (abst.), 1,
386: determination of, by absorption (abst.), 1, 372: spontaneously
inflammable (abst.), 12, 224
Phosphine, diphenyl-, and triphenyl- (abst.), 5, 22
Phosphonium chloride (abst.), 2, 88: chloride and bromide, heat of
formation of (abst.), 2, 89: iodide, action of, on carbon bisulphide
(abst.), 2, 171
Phosphor-bronze, analysis of, 19, 396: manufacture of, - 19, 393
Phosphor-copper, analysis of, 19, 396
Phosphor-tin, analysis of, 19, 396
Phosphorescence, violet, calcium sulphide with (abst.), - 8, 199
Phosphoric acid, existence of, in ammonium molybdate (abst.), 6, 98:
glacial, detection of sodium phosphate in (abst.), 10, 66: manu-
facture of (abst.), <b>2</b> , 434: observations concerning precipitation of,
as phosphomolybdate, 17, 43: preparation of (abst.), 8, 70: redu-
cing action of zinc on ammonium phosphomolybdate, 17, 747: re-
version of (abst.), 6, 168: reversion of, by heat, 6, 229: saturation
of, by bases (abst.), 4, 232: separation of, from boric acid, 19, 386:
separations of, from metals (abst.), 1, 532: in soils, on (abst.), 6,
137; in soils, in northern France, amounts of (abst.), - 4, 77
Phosphoric acid, determination of, actual accuracy of, 18, 812: by ci-
trate method, for small quantities, 17, 513: of citrate-soluble, as
phosphomolybdate, 16, 304: comparison of methods and results,
16, 462: (abst.), 6, 241; 7, 179: in contaminated waters (abst.), 9,
174: in fertilizers (abst.), 6, 241; 7, 210: in fish guano (abst.), 1,
355: in fodders, 19, 320: as magnesium phosphate, with alkali-
metric titration (abst.), 1, 281, 352: as magnesium pyrophosphate,
4, 135; 16, 289: (abst.), 1, 353, 537; 2, 220; 5, 243; 7, 178: by mo-
lybdate-magnesia method, 16, 793: (abst.), 1, 538: reverted (abst.),
1, 355; 4, 163; 7, 178: reverted, Mohr's improvements in, remarks
on (abst.), 7, 179: in soils, 17, 295: (abst.), 6, 194: in superphos-
phates, P. 2, 64: in Thomas slags (abst.), 9, 119: by titration of
phosphomolybdate with alkali (Pemberton's method), 15, 382;
16, 278; 17, 178; 18, 389; 19, 703: by titration, etc., compared with
gravimetric determination, 16, 282, 765; 17, 941, 950: by titration
of phosphoric acid with molybdic solution (abst.), 4, 164: by titra-
tion of phosphoric acid with uranium solution (abst.), 1, 356; 4,
164; 9, 118: in urine (abst.), 4, 196: by weighing phosphomolyb-
date, 18, 23: (abst.), 1, 538; 5, 52: in sweet wines (abst.), - 11, 53
Phosphoric anhydride, apparatus for preparing (abst.), - 9, 175
Phosphorous anhydride, decomposition of, by sunlight (abst.), - 6, 44
Phosphorus attempt to find the amount of in three samples of

steel, 16, 217: black (abst.), 4, 272: determination of, in aluminum solders, 18, 777: in iron and steel, condition of, 16, 477: imperfectly oxidized, in urine (abst.), 6, 129: note on liquid, 20, 303: oxidation of (abst.), 6, 44: in phosphor-bronze, note on, 15, 115: reduction of carbon dioxide by, at ordinary temperatures, 1, 230: in steel, influence of heat treatment and carbon upon solubility of, 19, 786: volumetric estimation of oxygen by means of (abst.), 1, 372
Phosphorus chloronitrides, 19, (43): chlorides, action of, on phenan-
thraquinone (abst.), 5, 69: iodides, molecular weight of (abst.),
4, 272: oxychloride, distinction of, from phosphorus trichloride
(abst.), 12, 70: oxychloride from tricalcium phosphate (abst.), 5,
120: pentachloride, action of, on acetyl- and benzoyl-diphenyla-
mine (abst.), 4, 264: pentachloride, action of, upon molybdenum
trioxide, 16, 425: pentachloride, action of, on $\alpha$ -naphthylsulpho-
uic acid (abst.), 4, 228: pentasulphide (abst.), 4, 227: pentasul-
phide, action of, on aniline (abst.), 10, 40: pentoxide, apparatus
for preparing (abst.), 9, 175: pentoxide, as a drier for gases
(abst.), 10, 67: sulphides (abst.), 6, 189: trichloride, combination of, with titanium tetrachloride (abst.), 2, 434: trisulphide, new
sulphur salts derived from (abst.), 6, 76
Phosphorus, determination of, in iron ores (abst.), 6, 193: in iron ores
examination of methods for, 4, 88: of insoluble, in iron ores, 19,
614: in iron and steel, (abst.), 1, 104; 9, 8: by acidimetric titra-
tion of phosphomolybdate, 19, 792: actual accuracy of, 18, 811:
with ammonium molybdate and magnesia, P. 1, 167: comparison
of methods, 19, 100: error in, from use of aqua regia in dissolv-
ing, P. 1, 2, 58: modification of molybdate method for (abst.), 6,
193; 7, 294: by molybdate-magnesia method, note on, 20, 429: pre-
cipitation of phosphomolybdate in, 18, 170: in presence of arsenic,
16, 231: proposed standard method for (Dudley's), 15, 519; 16,
224, 234, 553; 17, 129; 18, 955: note on, 15, 480: in native copper
(abst.), 6, 241 Photochemical estimation of graded tint (abst.), 10, 86
Photochemical estimation of graded tint (abst.), 10, 86 Photographic process by means of aniline black, 8, 189: a new (abst.), 12, 476
Photography, spectrum, in relation to quantitative analysis (abst.), 6, 243
Photometer, chemical (abst.), 2, 173
Photometric measurements, new unit for (abst.), 1, 373
Phthalic acid, amidobenzoic acid derivatives of (abst.), 7, 202: action
of nitrogen trioxide on, 12, 56
Phthalic anhydride, action of, on gallic acid (abst.), 4, 244, 296: action
of, on naphthalene in presence of aluminum chloride (abst.),
1, 485: action of, on quinoline (abst.), 5, 67: and xylenes, acids
produced from (abst.), 5, 17
Phthalide, action of potassium cyanide on (abst.), - 7, 204
Phthalimide, 18, 679
iso-Phthalophenone (abst.), 2, 131, 367
Phthalylacetoacetate, ethyl (abst.) 5, 238

Phthalyl chloride (abst.), 7, 57: contributions to knowledge of (abst.), 2, 371
Physical chemistry, achievements and aims of, 16, 516: opening ad-
dress before section of, World's Congress of chemists, 15, 601:
problems of, 14, 360
Physical constants of compounds, relations between (abst.), 4, 264:
of isomeric derivatives of xylene, relations of (abst.), 8, 178
Physical properties of chemical compounds (abst.), 6, 43: and chem-
ical constitution, relations between, 2, 118
Physics and chemistry, borderland between (presidential address), 13, 11
Physics and chemistry, connection between (abst.), 8, 178
Pickles, examination of, for copper, 2, 340
Picoline, on commercial (abst.), 7, 146
Picraminic acid, action of cyanogen on (abst.), 4, 264
Picrate, acridine (abst.), 7, 84
Picric acid from morphine (abst.), 4, 76
Picrotoxin, characteristic reactions of (abst.), 1, 339
Picrylsulphonic acid, and its sodium salt (abst.), - 7, 288
Pilocarpine, action of acids on (abst.), 4, 236: researches on (abst.), 4, 78
Pimelic acid, presence of, in the oxidation products of castor oil (abst.), 8, 110
Pinacone, constitution of (abst.), 2, 54
Pine tree sugar, 13, 228
Pinus sylvestris, occurrence of phenol in the stems and leaves of
(abst.), 6, 93
Piperidine, contributions to knowledge of (abst.), 4, 262: observations
Piperidine, contributions to knowledge of (abst.), 4, 262: observations on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.), 6, 162; 7, 86
on (abst.), <b>5</b> , 131: oxidation of (abst.), <b>5</b> , 133: synthesis of (abst.), 6, 162; 7, 86 Piperidine bases, phenylated (abst.), <b>9</b> , 196: bromoselenate, - 20, 576
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.), 6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28
on (abst.), <b>5</b> , 131: oxidation of (abst.), <b>5</b> , 133: synthesis of (abst.),  6, 162; <b>7</b> , 86  Piperidine bases, phenylated (abst.), <b>9</b> , 196: bromoselenate,  - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, <b>16</b> , 643: new overflow, <b>5</b> , 218: rapid measur-
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate,  - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate,  - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1  Plant louse, honey from, 14, 350
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1  Plant louse, honey from, 14, 350  Plants, cause of acridity in, 13, 215: chemical phenomena of the res-
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1  Plant louse, honey from, 14, 350  Plants, cause of acridity in, 13, 215: chemical phenomena of the respiration of (abst.), 6, 232: chemical and microscopical researches
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1  Plant louse, honey from, 14, 350  Plants, cause of acridity in, 13, 215: chemical phenomena of the respiration of (abst.), 6, 232: chemical and microscopical researches on the cell contents of some (abst.), 5, 101: on the chemistry of
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1  Plant louse, honey from, 14, 350  Plants, cause of acridity in, 13, 215: chemical phenomena of the respiration of (abst.), 6, 232: chemical and microscopical researches on the cell contents of some (abst.), 5, 101: on the chemistry of (abst.), 6, 93: fixation of atmospheric nitrogen by (abst.), 12, 72:
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1  Plant louse, honey from, 14, 350  Plants, cause of acridity in, 13, 215: chemical phenomena of the respiration of (abst.), 6, 232: chemical and microscopical researches on the cell contents of some (abst.), 5, 101: on the chemistry of (abst.), 6, 93: fixation of atmospheric nitrogen by (abst.), 12, 72: living, carbonates in (abst.), 8, 21: proximate analysis of (abst.), 2, 220  Plaster of Paris method in blowpipe analysis, some extensions of the, 18, 849
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1  Plant louse, honey from, 14, 350  Plants, cause of acridity in, 13, 215: chemical phenomena of the respiration of (abst.), 6, 232: chemical and microscopical researches on the cell contents of some (abst.), 5, 101: on the chemistry of (abst.), 6, 93: fixation of atmospheric nitrogen by (abst.), 12, 72: living, carbonates in (abst.), 8, 21: proximate analysis of (abst.), 2, 220  Plaster of Paris method in blowpipe analysis, some extensions of the, 18, 849
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate, - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids, 15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.), 6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address), 16, 1  Plant louse, honey from, 14, 350  Plants, cause of acridity in, 13, 215: chemical phenomena of the respiration of (abst.), 6, 232: chemical and microscopical researches on the cell contents of some (abst.), 5, 101: on the chemistry of (abst.), 6, 93: fixation of atmospheric nitrogen by (abst.), 12, 72: living, carbonates in (abst.), 8, 21: proximate analysis of (abst.), 2, 220  Plaster of Paris method in blowpipe analysis, some extensions of the, 18, 849  Plate towers of Lunge-Ruhrmann, 15, 361
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate,  - 20, 576  Piperine, artificial (abst.), 5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids,  15, 190  Plant extracts, Schlösing's ammonia estimation process for (abst.),  6, 41  Plant fibres, analysis of some (abst.), 5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of (presidential address),
on (abst.), 5, 131: oxidation of (abst.), 5, 133: synthesis of (abst.),  6, 162; 7, 86  Piperidine bases, phenylated (abst.), 9, 196: bromoselenate,  - 20, 576  Piperine, artificial (abst.),  5, 28  Pipette, a new automatic, 16, 643: new overflow, 5, 218: rapid measuring, 18, 905: for weighing liquids,  5, 92  Plant extracts, Schlösing's ammonia estimation process for (abst.),  6, 41  Plant fibres, analysis of some (abst.),  5, 92  Plant food in soils, estimation of, 20, 107: waste and conservation of  (presidential address),

antimony, arsenic and tin, qualitative (abst.), 10, 156: sponge, decomposition of ammonium nitrite by means of (abst.), 12, 473:
study of salts of (abst.), 8, 176: volatilization of, in chlorine gas,
1, 479, 48
Platinum bromide (abst.), 2, 371: chloride, preparation of pure,
12, 140: chloride, recovery of waste, 19, 258: iodide as a reagent
for deleterious organic substances in potable water, 5, 74: potas-
sium mixed double halides, 18, 130: sulphocyanate (abst.), 2, 430:
sulphocyanate, a new (abst.), 2, 36
Platinum black, preparation of very active (abst.), 12, 154: metals,
action of hydrochloric acid and oxygen upon, 15, 272: metals, ex-
plosive alloys of, with zinc (abst.), 4, 240: retort, explosion of
(abst.), 2, 130: vessels, soldering and repairing of (abst.), - 7, 15
Poisoning by carbon monoxide, 10, 176: combined arsenical and anti-
monial, chemical history of, 17, 66
Poisonous honey, 19, (10
Poisons, testing for, in saliva (abst.), 1, 40
Polariscope, exact determination of cane-sugar by, 1, 2: illumination
for, with acetylene, 18, 17
Polariscopic apparatus, official methods for verifying, 20, 92
Polaristrobrometric chemical analysis, 11, 59, 8
Polarization. See Rotation.
Polarized light, action of oils on (abst.), 9, 176: action of solutions of
cellulose on (abst.), 6, 93: for examination of the alkaloids of the
quinine group, P. 2, 5
Polyporic acid, contributions to the knowledge of (abst.), - 1, 25
Porcelain, Arita, raw materials used in, 2, 31
Porphyries, analysis of, 12, 13
Porpoise milk, composition of (abst.), 7, 290: fat of (abst.), - 8, 18
Portland cement, chemical and physical examination of,
15, 181; 16, 161, 283, 323, 37
Potash bulbs, a new form of, 18, 94
Potash industry at Stassfurt (abst.), 6, 2
Potassium acid tartrate, determination of (abst.), 7, 295; 9, 120: amal-
gam, action of, on potassium tetra- and pentathionate (abst.),
4, 224: barium ferrocyanide, 20, 32: barium ruthenocyanide,
20, 30: bromoselenate, 20, 570: carbonate, determination of
sodium compounds in (abst.), 4, 165: carbonate, Solvay process
for production of (abst.), 4, 74: chlorate, action of ferric oxide on
(abst.), 4, 142: chlorate, decomposition of, by heat in presence of
manganese dioxide (abst.), 10, 187: chlorate, detection of ni-
trates in (abst.), 9, 174: chlorate, electrolysis of (abst.), 8, 19:
chloride, influence of pressure and temperature in the action of,
on methylamine carbonate (abst.), 9, 103: chlorobromoplatinites,
2, 196: cobaltocyanide (abst.), 1, 272: cyanide, action of, on
phthalide (abst.), 7, 204: cyanide, action of, on potassium tri-
chloracetate (abst.), 4, 231; evanide, decomposition of, 6, 222;

4, 269

dichromate, titration of (abst.), 4, 165: hydrindigotin sulphate and indoxylsulphate (abst.), 2, 371: hydroxide, action of, on lead oxide (abst.), 4, 237: hydroxide, action of, on potassium tetra- and pentathionate (abst.), 4, 224: hydroxide, action of, on resin (abst.), 8, 206: hydroxide, alcoholate of (abst.), 8, 273: hydroxide, alcoholic, action of, on urea and derivatives (abst.), 8, 166: hydroxide, behavior of arsine towards (abst.), 12, 353, 477: indigo-white sulphate and indoxylsulphate (abst.), 2, 371: iodide, action of sulphuric acid on (abst.), 5, 232: iodide containing lead, behavior of, towards hydrogen sulphide (abst.), 1, 169: iodide, estimation of, in a complex organic mixture, 16, 157: iodide, quality of commercial, 16, 678: manganate, and some of its analytical uses (abst.), 9, 119; palladium bromide, 16, 466; perchlorate, electrolysis of (abst.), 8, 19: periodide (abst.), 1, 384: permanganate, action of, upon oxalic acid, P. 2, 153: permanganate, lead oxalate for standardizing (abst.), 1, 586: permanganate, methods of estimating organic matter by the reduction of (abst.), 6, 41: permanganate, oxidation of oleic acid by (abst.), 7, 207: permanganate, reaction of, with hydrogen dioxide, 11,94: permanganate, titrations with (abst.), 7, 90: platinum mixed double halides, 18, 130: ruthenium nitrosochloride, 16, 389: ruthenocyanide, 18, 986: salts, volatility of, 19, 156: selenocyanate, action of iodine on (abst.), 6, 34: sesquicarbonate (abst.), 5, 66: silver haloid salts (abst.), 4, 235: sodium carbonate (abst.), 10, 77: sodium racemates (abst.), 8, 37: sulphate, heat of solution of (abst.), 7, 52: tetra- and pentathionate (abst.), 4, 224: trinitride, 20, 227

Potassium, determination of, 8, 12: actual accuracy of, 18, 817: as acid tartrate, P. 1, 98: in fertilizers, 17, 46, 47: in fertilizers, oxidation of organic matter for, 17, 86: in fodders, 19, 320: in fertilizers, sources of error in methods of, 16, 364: in kainite, 17, 85: the Lindo-Gladding method, 20, 597: platinichloride, 17, 453: without previous removal of iron and calcium, 20, 340: in silicates (abst.),

1, 536: small quantities of, 2, 145: volumetric of (abst.), - 1, 333, 536 Potato, determination of starch in (abst.), 10, 87: proteids of the, - 18, 575 Potato, sweet, carbohydrates of (abst.), 12, 351: examination of, Pottery industry of the United States, chemistry of, -15, 651, 695 Poultry, meat of, when fattened by the French process, -Powders, (smokeless) composition of, Powders, determination of specific gravity of (abst.), -Praseodidymium, separation of, from iron, Praseodidymium molybdate, composition and solubility of, 17, 529: tungstate, composition and solubility of, Precipitates, determination of, without filtration, washing, and drying (abst.), 1, 84: new method of filtration and ignition of (abst.), 1, 582: separation and treatment of (abst.), - -Pressure, combustion under high (abst.), 12, 349: effect of, on crystallization and combination (abst.), 6, 38: formation of alloys by

(abst.), -

Pressure tubes (abst.), 10, 69 Pressure-regulator, for distillations, etc. (abst.), 1, 250 Prism, compound, of great dispersive power (abst.), 1, 172 Prisms, colored, as colorimetric standards, 18, 484 Problems, chemical, of to-day (address by Victor Meyer), - 11, 101 Proceedings of American Chemical Society, P. 1, 20, 22, 83, 113, 133, 175, 177, 209, 225: P. 1, 2, 1, 18, 47, 66, 71, 72: P. 2, 1, 13, 34, 51, 69, 82, 115, 135, 137, 138, 145; 1, 1, 6, 37, 79, 127, 183, 383, 408, 461, 507; 2, 1, 73, 107, 145, 195, 233, 361, 379, 407, 443; 3, 1, 3, 24, 32, 34, 54, 81, 95, 108, 118; 4, 1, 10, 24, 34, 57, 87, 92, 211, 243, 290; 5, 1, 31, 71, 103; 6, 1, 3, 54, 111, 146, 180, 208, 282, 302; 7, 1, 39, 71, 99, 131, 157, 187, 221, 237, 259; 8, 1, 31, 69, 115, 209, 245; 9, 1, 21, 51, 127, 161, 181, 205; 10, 31, 97, 121, 161, 175, 185; 11, 1, 29, 57, 123, 139, 153; 12, 1, 25, 53, 79, 127, 183, 247, 252, 304, 367, 423, 481, 484; 13, 6, 63, 69, 109, 133, 151, 175, 191, 196, 227, 245, 261; 14, 1, 23, 43, 81, 125, 147, 169, 239, 311, 325, 326; 15, 55, 177, 296, 598: Note, after volume 15, see Council, Meetings, Directors, etc. Proceedings of World's Chemical Congress, 15, 305
Pronunciation and spelling of chemical terms, 14, 63
Pronunciation and spelling of chemical terms, 14, 63 Propanes, dibrom-, the two isomeric (abst.), 2. 181
Propionic acid (abst.), 8, 275: derivatives of (abst.), - 2, 135
Propionic acid, $\alpha$ -dibrom-, maleic and malic acids from (abst.), 2, 172:
α-dichlor-, preparation of dichloradipic acid from (abst.), 8, 35: dichlor-, formation of, from glyceric acid (abst.), 2, 289: dichlor-,
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 12, 158 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296  Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94  iso-Propylacetylene, preparation of (abst.), 12, 158  Propylamine (abst.), 12, 158  p-Propylbenzoic acid, synthesis of (abst.), 5, 20  Propylenechlorhydrin (abst.), 7, 118  Propylideneacetic acid, contributions to the knowledge of, - 17, 17  Propyl- and amylnaphthalene, preparation of (abst.), 6, 164  Propylsuccinic acid (abst.), 4, 270
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296  Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94  iso-Propylacetylene, preparation of (abst.), 12, 158  Propylamine (abst.), 12, 158  p-Propylbenzoic acid, synthesis of (abst.), 5, 20  Propylenechlorhydrin (abst.), 7, 118  Propylideneacetic acid, contributions to the knowledge of, - 17, 17  Propyl- and amylnaphthalene, preparation of (abst.), 6, 164  Propylsuccinic acid (abst.), 4, 270  iso-Propylsuccinic acid (abst.), 4, 270
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 12, 158 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 12, 158 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509 Proteid substances, determination of sulphur in (abst.), - 8, 60
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 12, 158 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509 Proteids substances, determination of sulphur in (abst.), - 8, 60 Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18,
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296  Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94  iso-Propylacetylene, preparation of (abst.), 10, 81  Propylamine (abst.), 12, 158  p-Propylbenzoic acid, synthesis of (abst.), 5, 20  Propylenechlorhydrin (abst.), 7, 118  Propylideneacetic acid, contributions to the knowledge of, - 17, 17  Propyl- and amylnaphthalene, preparation of (abst.), 6, 164  Propylsuccinic acid (abst.), 4, 270  iso-Propylsuccinic acid (abst.), 4, 270  Proteid of the adzuki bean, 4, 270  Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18, 621: of the castor-bean, 18, 621: of the cocoanut, 18, 621: of
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.),  12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509 Proteids substances, determination of sulphur in (abst.), 8, 60 Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18, 621: of the castor-bean, 18, 621: of the cocoanut, 18, 621: of cotton-seed, 16, 778: of the cow pea, 19, 494: of cow's milk, 13, 72:
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.), 12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 4, 270 Proteids substances, determination of sulphur in (abst.), 8, 60 Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18, 621: of the castor-bean, 18, 621: of the cocoanut, 18, 621: of cream, 20, 858: of the filbert, 18, 618: of the hazel-nut, 18, 618:
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.), 12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509 Proteids substances, determination of sulphur in (abst.), 8, 60 Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18, 621: of the castor-bean, 18, 621: of the cocoanut, 18, 621: of cream, 20, 858: of the filbert, 18, 618: of the hazel-nut, 18, 618: of hemp seeds, 18, 621: of the horse-bean, 20, 393: of the kidney-
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.), 12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509 Proteids substances, determination of sulphur in (abst.), 8, 60 Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18, 621: of the castor-bean, 18, 621: of the cocoanut, 18, 621: of cotton-seed, 16, 778: of the cow pea, 19, 494: of cow's milk, 13, 72: of cream, 20, 858: of the filbert, 18, 618: of the hazel-nut, 18, 618: of hemp seeds, 18, 621: of the horse-bean, 20, 393: of the kidney-bean, 16, 633, 703, 757: of the lentil, 20, 362, 410: of lupin seeds,
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.), 12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509 Proteids substances, determination of sulphur in (abst.), 8, 60 Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18, 621: of the castor-bean, 18, 621: of the cocoanut, 18, 621: of cream, 20, 858: of the filbert, 18, 618: of the hazel-nut, 18, 618: of hemp seeds, 18, 621: of the horse-bean, 20, 393: of the kidney-bean, 16, 633, 703, 757: of the lentil, 20, 362, 410: of lupin seeds, 19, 454: of the maize kernel, 19, 525: of malt, 18, 542: of the pea,
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.), 12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509 Proteids substances, determination of sulphur in (abst.), 8, 60 Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18, 621: of the castor-bean, 18, 621: of the cocoanut, 18, 621: of cotton-seed, 16, 778: of the cow pea, 19, 494: of cow's milk, 13, 72: of cream, 20, 858: of the filbert, 18, 618: of the hazel-nut, 18, 618: of hemp seeds, 18, 621: of the horse-bean, 20, 393: of the kidney-bean, 16, 633, 703, 757: of the lentil, 20, 362, 410: of lupin seeds, 19, 454: of the maize kernel, 19, 525: of malt, 18, 542: of the pea, 20, 348, 410: of the peach seed, 18, 613: of the potato, 18, 575: of
dichloradipic acid from (abst.), 8, 36: phenoxy- (abst.), - 1, 296 Propyl alcohol, normal, compound of calcium chloride with (abst.), 12, 156: normal, from glycerol (abst.), 2, 94 iso-Propylacetylene, preparation of (abst.), 10, 81 Propylamine (abst.), 12, 158 p-Propylbenzoic acid, synthesis of (abst.), 5, 20 Propylenechlorhydrin (abst.), 7, 118 Propylideneacetic acid, contributions to the knowledge of, - 17, 17 Propyl- and amylnaphthalene, preparation of (abst.), 6, 164 Propylsuccinic acid (abst.), 4, 270 iso-Propylsuccinic acid (abst.), 4, 270 Proteid of the adzuki bean, 19, 509 Proteids substances, determination of sulphur in (abst.), 8, 60 Proteids of the almond, 18, 610: of barley, 17, 539: of brazil-nuts, 18, 621: of the castor-bean, 18, 621: of the cocoanut, 18, 621: of cream, 20, 858: of the filbert, 18, 618: of the hazel-nut, 18, 618: of hemp seeds, 18, 621: of the horse-bean, 20, 393: of the kidney-bean, 16, 633, 703, 757: of the lentil, 20, 362, 410: of lupin seeds, 19, 454: of the maize kernel, 19, 525: of malt, 18, 542: of the pea,

410: of walnut seeds, 18, 616: of the wheat kernel, 16, 524
Protein compounds in milk, determination of (abst.), - 9, 48
Protein, vegetable, heat of combustion of, 20, 307
Proteoses of malt, 18, 549
Protoplasm, living, reducing properties of (abst.), 5, 20: note upon
Bütschli's experimental imitation of, 12, 298
Prussiates. See Ferrocyanide and Ferricyanide.
Pseudocumene, nitro-, pseudocumidine, and pseudocumenol, holding
the positions 1:3:4:5 (abst.), 7, 249
Pseudouric acid (abst.), 1, 389
Ptomaines, alleged reaction for (abst.), 4, 193: from fish (abst.), 7,
175: formation of, in cholera (abst.), 7, 80: found in the human
cadaver (abst.), 1, 554: and leucomaines (abst.), 9, 114
Purpurin, oxidation of (abst.), 7, 59
Purpurins, the isomeric, chronology of, 1, 184
Purpurin alum solutions, effect of change of density on the absorption
bands of, 2, 362
Putrefaction, contributions to the history of (abst.), 2, 343: of albumin,
influence of carbohydrates etc. on (abst.), 8, 230
Pyknometer, a new, 3, 26: new form of, 19, 61: improved form of, - 19, 111
Pyrazole, synthesis of (abst.), 12, 233
m-Pyrazolones of Pinner and Lifschutz (abst.), 10, 82
Pyridine, action of bromine on (abst.), 4, 242: nicotinic acid from
(abst.), 4, 176
Pyridine alkyl hydroxides, 18, 247: alkyl iodides, notes on some,
18, 91: bromoselenate, 20, 575: carboxylic acids (abst.), 2, 96;
6, 287: ethyl iodide, 18, 92: halides and perhalides, 19, 558: iso-
propyl hydroxide, 18, 249: isopropyl iodide, 18, 93: methyl iodide,
18, 91: periodides, 17, 859; 19, 322: propyl hydroxide, 18 248:
propyl iodide, 18, 92
Pyridine bases (abst.), 2, 89: bases, action of ethylene chlorhydrin on
(abst.), 4, 272: compounds obtained by condensation (abst.),
6, 83: derivatives (abst.), 6, 83: derivatives, formation of, from
malic acid (abst.), 7, 117: series, isomerism in (abst.), 6, 83:
series, synthesis of alcohols in (abst.), 12, 160
Pyridine and piperidine, observations on (abst.), 5, 131: and piperi-
dine bases, phenylated (abst.), 9, 196: and quinoline series, detec-
tion and determination of the bases of (abst.), 7, 292
Pyridinetricarboxylic acid from the alkaloids of the quinine group
(abst.), 2, 172
Pyrite from York, Pa., 15, 543
Pyrites, composition of gaseous products in the combustion of (abst.),
7, 124: determination of arsenic in (abst.), 10, 66: determination
of sulphur in, 16, 398; 17, 181, 397, 772; 18, 446, 685: (abst.), 4, 161:
iron, synthesis of (abst.), 12, 155
Pyrocinchonic acid, preparation of, from $\alpha$ -dichlorpropionic acid
(abst.), 8, 35

Pyrocoll, synthesis of (abst.), 6, 86
Pyrocresols, three isomeric (abst.), 9, 195
Pyrogallol, antiseptic qualities of (abst.), 1, 497: chlorination of
(abst.), 6, 238: oxidation of, in presence of gum arabic (abst.), 4, 237
Pyrogalloltriglycollic acid (abst.), 1, 496
Pyromeconic acid (abst.), 1, 294, 490
Pyrophosphates, double, use of, in electrolytic separations (abst.), 12, 168
Pyroracemic acid (abst.), 2, 53
Pyrosulphuryl chloride, preparation of (abst.), 5, 126: vapor density
of (abst.), 4, 78
Pyrotartaric acid, behavior of, with bromine (abst.), - 6, 308
Pyroxylin, chemical composition of (abst.), 2, 173: denitration of, 14,
112: heat of formation of (abst.), 2, 435: manufacture and appli-
cations of, 15, 140; 16, 487, 543
Pyrrhotite from Clayton, New York, analysis of, 4, 214: determination
of, in pyrites, 18, 404: nickeliferous, constitution of, - 14, 369
Pyrrol, action of acetic anhydride and benzoic anhydride on (abst.),
7, 84: action of cyanogen chloride on potassium compound of
(abst.), 5, 64: blue dye-stuff from (abst.), 6, 161
Qualitative analysis, application of diphenylamine and aniline in
(abst.), 5, 52: use of sodium peroxide in, 19, 341
Quantitative analysis, notes on, 12, 131: spectrum photography in re-
lation to (abst.), 6, 243
Quantitative work for beginners in chemistry, 16, 59
Quartz, estimation of, in rocks and clays (abst.), 6, 239: petroleum
inclusion in crystals of, 20, 795
Quercitrin and quercitin, identity of a coloring matter with (abst.), 4, 206
Quicklime, determination of calcium oxide in, 16, 721: technical valu-
ation of (abst.), 1,559
Quinamine (abst.), 2, 176
p-Quinanisoïl, derivatives of (abst.), 7, 84
Quinazole compounds (abst.), 5, 238
Quinine, estimation of, in quinine tannate (abst.), 12, 120: modifica-
tion of the thalleoquin test for, 19, 331: oxidation of, by potassium
permanganate, 1, 80, 169: oxidation products of (abst.), 1, 395:
synthesis of (abst.), 4, 236
Quinine group, polarized light for examination of the alkaloids of P. 2, 57
Quinine sulphate, analysis of commercial (abst.), 7, 226: detection of
cinchonidine in (abst.), 8, 233: identification of - 17, 933
Quinol, action of sulphuric acid on, and value of product as a develo-
per, 13, 155: some derivatives of (abst.), 1, 161: sulphonic acids
of (abst.), 5, 239
Quinolsulphonic acid, value of, as a developer, 13, 155
Quinoline, action of bromine on (abst.), 4, 242: action on chloroform
and iodoform (abst.), 5, 66: action of ethylene chlorhydrin on
(abst.), 4, 272: action of phthalic anhydride on (abst.), 5, 67: am-
monium bases derived from (abst.), 7, 119: bases produced from

addition products of, with haloid ethereal salts (abst.), 4, 265; 5,	
23: on the constitution of (abst.), 5, 61: derivatives of, (abst.), 5,	
25, 52: halogen derivatives of (abst.), 4, 268: a homologue of	
(abst.), 7, 145: and lutidine (abst.), 4, 272: some substitution prod-	
	, 170
Quinoline, m-chlor-, derivatives of (abst.), 7, 229: p-dibrom- (abst.),	· ·
6, 236: diiodo- (abst.), 5, 24: α-hydroxy- (abst.), 5, 19: tetrabrom-	
(abst.), 5	, 24
` '	, 234
Quinoline and pyridine series, detection and determination of the bases	, -34
	, 292
β-Quinolinedisulphonic acid (abst.), ro	-
	, 236
Quinone, action of amines on (abst.), 8	_
Quinones, action of acid chlorides and bromides on (abst.), 5, 19:	, 23
action of amines on (abst.), 4, 226, 265: reaction used to determine	
	100
	, 199
	, 213 , 111
	_
Racemates, sodium and potassium (abst.), 8	, 308
Racemic acid (paratartaric acid), relative solubilities of dextro- and	, 37
	000
	, 116
	•
Rain-waters, tropical, proportions of chlorine and nitrogen in - 19	
	, 215
	, 193
Reaction, velocity of, between ferrous chloride, potassium chlorate,	
	, 193
	, 368
Reagent bottles (abst.), 7, 173	, 209
Reagents, concentration of (abst.), 12, 175: dilution of, by formula,	
	, 209
	, 339
	, 833
	., 176
Reduction of ferric alum by sugar, speed of, 19, 683: of metallic oxides	
	, 232
	, 176
	, 173
	, 14
Regulator, automatic, for evaporation and distillation (abst.), 1, 584:	
	, 501
	, 953
	, 98
Research, relation of, to teaching, 15	, 665

Researches on explosives, observations on Noble and Abel's (abst.), 1, 401
Resin, action of alcoholic potassium hydroxide on (abst.), 8, 206: esti-
mation of, in soaps (abst.), 8, 62: fir, delicate reaction for (abst.),
10, 195: from rose-wood (abst.), 2, 431
Resin oil, capronic acid occurring in (abst.), 4, 228: spirit, constitu-
ents of (abst.), 4, 200
Resins and gums, chemical examination of (abst.), 10, 157
Resins, new method of analyzing, 16, 275: studies upon - 12, 285, 392
Resistance of electrolytes, method for determining 20, 206
Resorcinol, action of acetaldehyde on (abst.), 9, 34: heat of solution
of, 18, 152, 154: nitro derivatives of (abst.), 5, 129: and thymol,
Resorcinol, diethoxy-, action of nitrous acid on (abst.), 1, 161
Resorcinol dye stuffs (abst.), 4, 268
Resorcinoldiethyl ether, action of nitrous acid on (abst.), 1, 161
Respiration, chemical phenomena of, in a super-oxygenated atmos-
phere (abst.), 6, 129: of plants, chemical phenomena of (abst.), 6, 232
Respiration calorimeter, description of a, 20, 681
Retene, constitution of (abst.), 7, 227
Reversion of phosphates and phosphoric acid. See Phosphates and
Phosphoric acid.
Rhabdophane, analysis of (abst.), 4, 203
Rhamnose, fucose, an isomer of (abst.), 12, 476
Rhode Island Section, meetings of, 17, (28), (32), (46), (62), (65); 18,
(33), (64), (68), (99), (120), (125); 19, (20), (22), (42), (50); 20,
(4), (25), (33), (83).
Rhodium, color reaction of (abst.), 8, 58: constitution of some double
salts of (abst), 12, 472: three new compounds of (abst.), - 7, 283
Rider, apparatus for moving (abst.), 1, 586
Riders, safety attachment for, 16, 764
Roccelin (sodium oxyazonaphthalenesulphonate), 1, 180
Rock analysis, plea for completeness in, 16, 90
Rock salt, association of hydrocarbons with, in nature (abst.), 10, 75:
from Saltville, Va., analysis of, 4, 255
Rosaniline, constitution of, note upon (abst.), 1, 271: examination of
wines for compounds of (abst.), 8, 57: formation of a blue dye-
stuff from (abst.), 6, 287: salts of, constitution of (abst.), - 2, 366, 431
Rosanilines, homologous and isomeric (abst.), 4, 237: probable num-
ber of homologous and isomeric (abst.), 6, 191
Rosin, determination of, in fats (abst.), 4, 192: determination of, in
soaps and fats (abst.), 8, 205: the iodine figure of, 16, 56
Rosin oil, detection of, in lard (abst.), 4, 192: separation of, from
mineral oil, 16, 385
Rosolene (abst.), 8, 56
Rotation, determination of, of levorotary solutions, 5, 104: of plane of
polarization, relations between amounts of (abst.) 4, 173

Rotary polarization under magnetic influence (abst.), - 4, 257
Rotary power, molecular, synthesis of compounds possessing (abst.), 6, 74
Rouge Français (abst.), 2, 226
Rubber, vulcanized, analysis of (abst.), 7, 178
Rubber goods, estimation of mineral matter in, 19, 952
Rubidium, atomic weight of (abst.), I, 106
Rubidium bromoselenate, 20, 570: columbium fluoride, 18, 58: fluo-
ride, 18, 57: ruthenium nitrosochloride, 16, 395: tantalum fluoride,
18, 58: trinitride, 20, 227
Rubijervine, chemistry of (abst.), 1, 554
Russian Chemical Society, report of papers of (abst.),
6, 77, 95, 128, 135, 157, 167
Ruthenium, electrolytic determination of, 17, 652: and its nitrosochlo-
rides, 16, 388
Ruthenocyanides, contributions to the knowledge of, 18, 981: some
Rye kernel, the proteids of, 17, 429
Sabadilla, alkaloids of,
Saccharate, antimonyl potassium (abst.), 6, 35
Saccharic acid and mucic acid, derivatives of (abst.), - 10, 17
Saccharimeter, new (abst.), 1, 92: for sugar analysis, 16, 677
Saccharimetric tests, table for correction of, 3, 89
Saccharin, on (abst.), 5, 20; 9, 34; 9, 217: detection of (abst.), 9, 201; 10, 88
Saffranine, formation of substituted (abst.), 10, 22: new mode of forma-
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: anti-
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detec-
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.),
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detec-
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: autiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88 Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374 Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88 Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59: nitro-, and isomerisms of benzene derivatives (abst.), 1, 233
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59: nitro-, and isomerisms of benzene derivatives (abst.), 1, 233
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59: nitro-, and isomerisms of benzene derivatives (abst.), - 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: patho-
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59: nitro-, and isomerisms of benzene derivatives (abst.), - 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), - 1, 402
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59: nitro-, and isomerisms of benzene derivatives (abst.), - 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), - 1, 402
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59:  nitro-, and isomerisms of benzene derivatives (abst.), 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), 9, 197  Salt industry of the Tees (abst.), 9, 197
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59:  nitro-, and isomerisms of benzene derivatives (abst.), 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), 9, 197  Salt industry of the Tees (abst.), 9, 197  Salt industry of the Tees (abst.), 10, 159  Salt solutions, decomposition of, by animal charcoal (abst.), 1, 95: elec-
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59:     nitro-, and isomerisms of benzene derivatives (abst.), - 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), - 9, 197  Salt industry of the Tees (abst.), 9, 197  Salt solutions, decomposition of, by animal charcoal (abst.), 1, 95: electrical conductivity of dilute (abst.), 6, 125: molecular volume of
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), - 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59:     nitro-, and isomerisms of benzene derivatives (abst.), - 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), - 9, 197  Salt industry of the Tees (abst.), 9, 197  Salt solutions, decomposition of, by animal charcoal (abst.), 1, 95: electrical conductivity of dilute (abst.), 6, 125: molecular volume of (abst.), 6, 48
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), - 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59:  nitro-, and isomerisms of benzene derivatives (abst.), - 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), - 9, 197  Salt industry of the Tees (abst.), 9, 197  Salt solutions, decomposition of, by animal charcoal (abst.), 1, 95: electrical conductivity of dilute (abst.), 6, 125: molecular volume of (abst.), 6, 48  Salts, boiling points of solutions of (abst.), 9, 109: combination of water
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), - 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59:     nitro-, and isomerisms of benzene derivatives (abst.), - 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), - 9, 197  Salt industry of the Tees (abst.), 9, 197  Salt solutions, decomposition of, by animal charcoal (abst.), 1, 95: electrical conductivity of dilute (abst.), 6, 125: molecular volume of (abst.), 6, 48  Salts, boiling points of solutions of (abst.), 9, 109: combination of water with (abst.), 8, 179: decomposition of, by water (abst.), 7, 140:
tion of (abst.), 10, 22: spectra of salts of (abst.), - 1, 374  Salicylic acid, amount of, in the cultivated pansy (abst.), 6, 233: antiseptic properties of (abst.), 4, 238: colorimetric estimation of (abst.), 4, 189; 9, 15: curve of solubility of (abst.), 1, 272; detection of, 1, 294, 578; 8, 278; 9, 15; 16, 198: determination of (abst.), 5, 118: reaction for iron, delicacy of (abst.), 1, 335: solubility of (abst.), - 1, 272; 2, 88  Salicylic acid, m-chlor-, products of nitration of (abst.), 1, 288; 2, 94:  p-hydroxy-(2:5-dihydroxybenzoic acid) (abst.), - 1, 495  Salicylic acids, iodo-, and dihydroxybenzoic acids (abst.), 5, 29, 59:  nitro-, and isomerisms of benzene derivatives (abst.), - 1, 233  Saliva, action of, on starch and glycogen (abst.), 1, 173, 273: pathological and poisonous substances detected in (abst.), - 9, 197  Salt industry of the Tees (abst.), 9, 197  Salt solutions, decomposition of, by animal charcoal (abst.), 1, 95: electrical conductivity of dilute (abst.), 6, 125: molecular volume of (abst.), 6, 48  Salts, boiling points of solutions of (abst.), 9, 109: combination of water

lutions to water of composition (abst.), 1, 392: isomorphous, and	
fractional crystallization, 6, 408: metallic, reactions of dipropyla-	
mine with (abst.), 8, 201: solubility of some, in fused sodium ni-	
trate (abst.), 7, 53: solubility of, in water (abst.), 7, 27: volatility	
	, 155
Samarium and its compounds (abst.), 5, 234: researches upon (abst.), 1	, 401
Samarskite, study of earth-metals contained in (abst.), 4	, 222
Sampling bar copper, rational mode of, 19, 243: by quartation, experi-	
	, 260
Sampling and analyzing commercial products, standard methods of	
	, 32
	, 243
	, 243 , 158
	_
	, 83
	, 571
	, 610
	, 126
	, 389
	, 391
	, 38
	, 353
	, 135
	, 476
Sealed tubes, apparatus for heating, 13	, 182
Sebacic acid, amidobenzoic derivatives of (abst.), 7, 202: bromine sub-	
stitution products of (abst.), 4, 204: oxidation of (abst.), 8, 28, 56	, 87
Sebacic and suberic acids, formation of, from crudefatty acids (abst.), 4	
Selenates, crystallized (abst.), 10	
Selenium, derivatives of, 20, 555: determination of atomic weight of	
20, 555: and tellurium, notes on, 19, 771: and tellurium, separa-	
tion of, and preparation of, from lead chamber deposit (abst.), 6	, 47
Selenium dioxide, pure, preparation of, 20, 559: double bromides, 20,	, 4,
568: halogen compounds of (abst.), 6, 76: monoxide, 20, 577: tet-	
rachloride, combination of auric chloride with (abst.), - 8	, 20
	, 20 , 179
	, 231
	, 275
Sewage disposal at Worcester, Mass., 16, 682: purification, recent work	
	, 103
Silica, determination of, in blast furnace slag, 16, 501; 19, 370: ultra-	
	, 172
Silica and alumina in pure wheat, relation between amounts of (abst.),	
	, 210
Silicates, decomposition of, by means of litharge (abst.), 1, 334: deter-	
mination of ferrous oxide in (abst.), 1, 85: determination of potas-	
sium and sodium in (abst.), 1, 536; 6, 312: fractional analysis of,	
13, 277: fusibility of, 12, 200, 307: insoluble, analysis of, 12, 134:	

natural, alkaline reaction of, 20, 739
Silieic acid, separation of, from tungstic acid, note on, - 19, 377
Silicic acid, ortho-, existence of, 19, 832
Silicides of iron, 17, 923
Silico-molybdic acid (abst.), 4, 77
Silicon (abst.), 4, 240: action of carbon disulphide on (abst.), 4, 240:
and carbon, new compounds of (abst.), 4, 237: carbide, 15, 411:
determination of, in aluminum, 18, 768: determination of, in
blast furnace slag, 19. 370: determination of, in iron and steel
(abst.), 1, 104, 285, 371, 562; 4, 165: determination of, in pig-iron
and steel, 19, 105: influence of, upon heat of solution of cast irons,
20, 690: influence of, on the properties of iron and steel (abst.),
10, 159: rapid method for determination of (in iron-manganese
alloys), 19, 138: in steel, note on Drown's method of determin-
ing, 20, 547
Silicon tetrachloride, derivatives of, 20, 13
Silk, raw, influence of composition of water in production of (abst.), 1, 159
Silk, cotton and wool, absorption of weak reagents by (abst.), - 5, 98
Silver, alloys of, with aluminum, 16, 485: ammoniacal alkaline solu-
tion of, as a reagent for aldehyde (abst.), 5, 50: atomic weight of,
19, 361; 20, 164: atomic weight of, electrolytic determination of,
18, 990: detection of, in metallic lead (abst.), 4, 168: determina-
tion of, in alloys (abst.), 1, 99: determination of, in copper, ac-
tual accuracy of, 18, 816: determination of, in galena (abst.), 1,
562: determination of, in lead, cause of discrepancies in, P. 1, 67:
determination of, Volhard's method for (abst.), 1, 535: electrolysis
of pyrophosphate of (abst.), 12, 171: flame reactions of, P. 1, 2,
33: a form of, obtained by reduction of silver sulphide, 16, 700:
metallic, presence of oxygen in (abst.), 1, 527: method of tough-
ening, in the melting crucible, <b>6</b> , 182, 210: oxidation of, 18, 254:
(abst.), 9, 169: separation of, from arsenic by hydrobronic acid
gas, 20, 806: separation of, from arsenic by means of hydrochloric
acid gas, 18, 1039: separation of, from cadmium, 16, 424: separa-
tion of, from copper, 16, 420: separation of, from lead (electro-
lytic), 15, 102
Silver ammonium compounds, history of (abst.), 6, 73: ammonium
oxide in solution, 2, 32: bromide, sensitiveness of, to light (abst.),

oxide in solution, 2, 32: bromide, sensitiveness of, to light (abst.), 6, 128: chloride, bromide, and iodide, blow-pipe experiments upon, P. 2, 74: cyanide, action of sulphur chloride on (abst.), 7, 201: cyanide, identification of minute quantities of (abst.), 5, 245: haloid salts, behavior of, towards bromine and iodine (abst.), 5, 245: iodide as a blow-pipe reagent, 7, 132: fulminate, decomposition of, by hydrochloric acid (abst.), 6, 90: fulminate, Liebig's production of, without nitric acid (abst.), 6, 46: nitrate, combination of, with the alkaline nitrates (abst.), 8, 50: nitrate, action of sulphur oxychlorides on (abst.), 4, 223: nitrate, action of thiophosphoryl chloride on (abst.), 4, 224: nitrate, alcoholic, a reagent for acetyl-

ene hydrocarbons (abst.), 10, 87: and potassium, haloid salts of
(abst.), 4, 235: salts of fatty acids, products of dry distillation of
(abst.), 8, 64: salts, action of molybdenum dioxide upon, 16, 569:
selenite, preparation of, 20, 560: sulphide, refining of, 18, 643: ul-
tramarine, some reactions of (abst.), 1, 163
Silver assay, commercial, accuracy of, 16, 505: loss of silver in, 16,
313: modified method of, 19, 814
Silver ores, reduction of, by hydrogen, in the wet way (abst.), 4, 241:
voltameter, use of Gooch crucible as, 12, 300
Sinapic acid (abst.), 6, 167
Siphon, automatic filtering, 19, 817
Skatole, constitution of (abst.), 2, 368: empirical formula of (abst.), 2, 137
Slag, determination of silicon in, 19, 370: from ignited garbage, analy-
sis of, 6, 188: Thomas, adulteration of (abst.), 12, 413
Slags, basic phosphatic, mechanical analysis of, 19, 19: blast furnace,
and the fusibility of silicates, 12, 189, 307: blast furnace, calcula-
tion of, 12, 443: Thomas (abst.), 9, 118: Thomas, method for de-
Smelting furnace of the United States mint, 7, 159
Smokeless powder, the development of (review), 18, 819
Snow water, examination of, 6, 187
Soap analysis, 5, 44: (abst.), 7, 179
Soap, dissociation of, by water, 12, 48: new antiseptic (abst.), 10, 92:
powdered, examination of (abst.), 8, 233: preparation of (abst.),
8, 206: preparation of, from suint and fuller's grease (abst.), 8, 87:
solutions of, action of sodium chloride on (abst.), 8, 104
Soaps (abst.), 8, 43: estimation of glycerol in (abst.), 10, 182: estima-
tion of resin in (abst.), 8, 62: preparation of soluble magnesia
(abst.), 8, 64: and fats, determination of rosin in (abst.), - 8, 205
Soap bubbles, opaque, for gas experiments, 12, 49
Soda industry (abst.), 6, 174
Soda, loss of, by formation of Gay-Lussite (abst.), 4, 74: process, am-
monia, influence of, on the value of hydrochloric acid and chlo-
rine (abst.), 6, 174: new processes for producing, study of reac-
tions for (abst.), 4, 75
Soda industries in United States, 15, 565
Soda liquors, Gay-Lussite in, 4, 73: vanadium compounds from (abst.), 4, 73
Soda lyes, oxidation of (abst.), 4, 73
Sodium, action of, on lupinin (abst.), 5, 17: compounds, determina-
Sodium, action of, on lupinin (abst.), 5, 17: compounds, determination of, in potassium carbonate (abst.), 4, 165: determination of, in aluminum, 18, 770: note on the spectrum of (abst.), 1, 373: and
Sodium, action of, on lupinin (abst.), 5, 17: compounds, determination of, in potassium carbonate (abst.), 4, 165: determination of,
Sodium, action of, on lupinin (abst.), 5, 17: compounds, determination of, in potassium carbonate (abst.), 4, 165: determination of, in aluminum, 18, 770: note on the spectrum of (abst.), 1, 373: and potassium, determination of, in silicates (abst.), 1, 536: vapor
Sodium, action of, on lupinin (abst.), 5, 17: compounds, determination of, in potassium carbonate (abst.), 4, 165: determination of, in aluminum, 18, 770: note on the spectrum of (abst.), 1, 373: and potassium, determination of, in silicates (abst.), 1, 536: vapor density of, experiments on (abst.), 2, 371
Sodium, action of, on lupinin (abst.), 5, 17: compounds, determination of, in potassium carbonate (abst.), 4, 165: determination of, in aluminum, 18, 770: note on the spectrum of (abst.), 1, 373: and potassium, determination of, in silicates (abst.), 1, 536: vapor

16,881

chemical investigation of (abst.), 6, 189: bromate, use of, in volumetric analysis (abst.), 7, 296: bromoselenate, 20, 570: carbonate, action of, on feldspars, etc. (abst.), 4, 199: carbonate, precipitation of alums by (abst.), 4, 258; chloride, action of, on solutions of soap (abst.), 8, 104: chloride, coloration of coal fire by (abst.), 10, 179: chloride, fibrous, P. 2, 141: chloride solutions, specific gravity of, 20, 621: ferrate, production of, 17, 763: fluorides (abst.), 6, 74: fluoride, volatility of, 16, 418: fulminate (abst.), 7, 201: glycerolate (abst.), 8, 184: hydroxide, action of, in expelling ammonia from salts and amines (abst.), 6, 27: hydroxide, action of, on feldspars, etc. (abst.), 4, 199: hydroxide, the Le Sueur process for production of, 20, 868: hydroxide, oxidation of sulphur compounds occurring in the manufacture of (abst.), 6, 28: hydroxide, preparation of standard solution of, 1, 525: nitrate, decomposition of, by sulphuric acid, 13, 246: nitrate, formation of deposits of (abst.), 8, 70: nitrate, fused, solubility of certain salts in (abst.), 7, 53: nitrite, qualitative separations with, 19, 434: nitroprusside, preparation of, 19, 23: palladium bromide, 16, 467: peroxide as an iron group reagent in qualitative analysis, 19, 341: peroxide in quantitative analysis, 20, 130: phosphate, detection of, in glacial phosphoric acid (abst.), 10, 66: potassium double carbonate (abst.), 10, 77: potassium racemates (abst.), 8, 37: racemates (abst.), 8, 37: salts, volatility of, 19, 156: sulphate, anhydrous, heat evolved on mixing of, with water (abst.), 1, 395: sulpliate, modifications of (abst.), 7, 28: sulphite and acid sulphite, thermochemical investigation of (abst.), 6, 189: trinitride, 20, 226: vanadate, action of hydrochloric acid gas upon, - -16, 578 Sodium flame, lamp for, Sodium glyoxal acid sulphite, thermochemical examination of (abst.), - - - - - -6, 189 Soil, analysis of, changes in official methods of, 16, 792: effects of salts and fertilizers on moisture of, 19, 620: rich in organic matter, germination in (abst.), 7, 25: vegetable, nitrogenous principles of - - -9, 104 Soils, acidity in, relative sensibility of plants to, 20, 103: action of organic and mineral acids upon, 17, 148: analysis of (abst.), 6, 168: apparatus for determination of water-holding power of, 17, 769: argillaceous, fixation of atmospheric nitrogen by (abst.), 8, 18: chemical and physical investigation of, 16, 34; determination of ammoniacal nitrogen in (abst.), 6, 169: determination of nitric acid in (abst.), 4, 258: determination of phosphoric acid in (abst.), 6, 194: determination, dissemination, etc., of phosphoric acid in (abst.), 6, 137: emission of ammonia by (abst.), 10, 12: fixation of atmospheric nitrogen by (abst.), 10, 12; in northern France, phosphoric acid in (abst.), 4, 77: reduction of nitrates in (abst.), 5, 117 Solanine and its decomposition products (abst.), -1, 255 Solder for aluminum,

Solid state, numerical laws of (abst.), 6,	73
	244
Solubility of chlorides in presence of hydrochloric acid (abst.), 8, 163:	
effect in case of tri-ionic salts, investigation of the theory of, 20,	
194: of salts in water (abst.), 7, 27: of salts of weak acids in	
stronger acids, 20, 742: of weak acids in solutions of salts of other	
• • •	751
Solubilities, apparatus for determining, 16, 715: improved apparatus	
	375
Solution, apparatus for effecting, 19, 286: connection between pseudo	373
and true (abst.), 6, 286: of solid substances in their own solutions,	
	930
Solutions, boiling-points of (abst.), 9, 109: constitution of (abst.), 12,	)5-
351: formulae for mixing (abst.), 6, 43: salt, volume alterations	
attending the mixture of (abst.), 5,	97
Solvay process, improvement in (abst.), 4, 74: for production of potas-	21
sium carbonate (abst.), 4,	74
	173
	101
	44
Sorghum cane, analysis of, 3, 151: juice, predominant organic acid	44
	144
Sorghums, development of sugar in, 2,	
	182
· · · · · · · · · · · · · · · · · · ·	419
	233
Specific gravity bottle. See Pyknometer.	233
Specific gravity of fat at 100°, etc. (abst.), 10, 157: of liquids, deter-	
mination of (abst.), 2, 171: of powdered bodies, determination of	
	159
	228
	412
Spectra, absorption, of the alkaloids (abst.), 6, 309: absorption, of car-	412
bon compounds, relation of, to molecular structure (abst.), 4, 144:	
of azo colors, 6, 117, 149: of gases, influence of pressure and tem-	
perature on (abst.), 1, 93: homologous (abst.), 5, 236: regulator	
for projection of, by electric light (abst.), 7, 141: of solutions, dis-	
	169
	84
	583
Spectroscope, support for (abst.), 1, 379, 397: Thollon's, note on	T. F. O.
	172
	172
Spectroscopic examination of Lauth's violet and methylene blue, 6,	
304: of pure indigo (abst.), 6, 97: of vapors obtained on heating	222
* //	232
Spectrum, absorption, of bromine and iodine monochloride (abst.), I,	

95: absorption, of different liquids (abst.), 1, 94: of beryllium
(abst.), 5, II5
Spectrum analysis, quantitative, contributions to (abst.), 1, 374
Spectrum photography in relation to quantitative analysis (abst.), 6, 243
Speed of dissociation of brass (abst.), 6, 75
Spelling and pronunciation of chemical terms, 14, 63
Spermatic fluid, detection of (abst.), 1, 557
Spices, determination of purity of (abst.), 1, 570: examination of
(abst.), 70
Spiegel. See Iron.
Spinel, artificial production of (abst.), 9, 168
Stachyose, saccharide from Stachys tuberifera (abst.), - 12, 352
Stand, new laboratory, 13, 102
Standard solutions, dropping flask for, 16, 156
Stannic chloride, action of, on acetic acid and acetic anhydride
(abst.), 2, 363: chloride, action of water on (abst.), 12, 71: oxide,
separation of, from tungstic acid (abst.), 9, 200
Stannous chloride, action of iodine on, 19, 515: chloride, speed of re-
duction of ferric chloride by, 16, 314: iodide, solubility of, in wa-
ter and in hydriodic acid, 19, 845: oxide, action of acid solutions
on (abst.), 4, 234: oxide, action of alkaline solution on (abst.),
4, 235: salts, titration of, with iodine, 19, 809
Starch, action of diastase, saliva, and pancreatic juice on (abst.), I,
173, 273: action of diastase and sulphuric acid on (abst.), 1, 101:
determination of water in (abst.), 6, 137: equivalent to copper,
Wein's table of, recalculation of, 19, 452: hydrolysis of, by acids,
19, 261, 679: hydrolysis of, by acids, investigation of, 18, 869: pro-
cesses used in manufacture of, 17, 68: table of analyses of com-
mercial, 14, 316: transformation of, into glucose by cold water
(abst.), 1, 271
Starch, determination of (abst.), 6, 44: quick, 17, 64: with ammonia-
cal copper solution (abst.), 1, 547: comparison of methods for, 16,
726; 20, 253: in food-stuffs, 19, 192: and formula of (abst.), 1, 546:
method for (abst.), 9, 36, 46: in the potato (abst.), 10, 87: in sau-
sages (abst.), 1, 571: in wheat, 19, 302
Starch iodide (abst.), 10, 188
Starch products, estimation of carbohydrates in, 19, 698
Starch sugar, detection of, in cane sugar, 2, 111, 428: syrup, detection
of, in sugar-house molasses, 3, 87
Stas memorial, 18, 201
Stassfurt industry, progress of (abst.), 4, 75; 6, 24
Staurotide, analysis of (abst.), 7, 294
Steam, fractional distillation in a current of (abst.), - 7, 33, 251
Stearic acid, determination of, in fats, 19, 32: separation of, from oleic
acid (abst.), 1, 360
Stearin, beef, test for, in lard (abst.), 10, 182
, , , , , , , , , , , , , , , , , , , ,

of compression on hardness of (abst.), 4, 235: gases enclosed in
(abst.), 1, 165: gases occluded in (abst.), 6, 172: influence of heat
treatment and carbon upon the solubility of phosphorus in, 19,
786: influence of silicon on the properties of (abst.), 10, 159: rela-
tion between chemical composition and mechanical properties of
(abst.), 1, 278: separation of carbon from, new mixture for (abst.),
10, 156
Steel, determination in, of carbon, 15, 283; 18, 223: (abst.), 4, 165: of
carbon, by combustion in the wet way, 20, 243: of nickel, 16, 110:
of nitrogen (abst.), 1, 562: of phosphorus, 18, 955; 19, 792: of
phosphorus, notes on, 20, 429: of phosphorus, modification of
molybdate method for (abst.), 7, 294: of silicon (abst.), 4, 165: of
silicon, notes on Drown's method for, 20, 547: of sulphur, two
methods for (abst.), 10, 84
Steel and iron, present possibilities in the analysis of (presidential
address), 19, 93
Steel and iron, standard methods for analysis of, 15, 501: thermo-
chemical study of, 19, 754; 20, 78: work of committees on inter-
national standards for analysis of, 15, 448
Steel and iron, determination in, of carbon, 15, 213, 450, 526: (abst.),
12, 352: of carbon, colorimetric (abst.), 1, 371: of carbon, gas-
volumetric (abst.), 10, 68: of combined carbon, P. 2, 72: of chro-
mium (abst.), 10, 66: of phosphorus (abst.), 1, 104; 9, 8: of silicon
(abst.), 1, 104, 285, 371, 562: of sulphur (abst.), - 1, 560
Stereochemical considerations (abst.), 12, 155
Stereochemistry of creatinines, note on, 14, 284: index to literature of,
14, 241: of molecules containing nitrogen (abst.), - 12, 166
Sterilization, alleged, of river water by mine water, 12, 12
Sterilized solutions, apparatus for measuring (abst.), 9, 123
Stilbene, a new formation of (abst.), 2, 42
Still, a convenient, 17, 917: and water-oven, a new form of, - 17, 122
Stop-cocks, glass, lubricants for, 20, 678
Stove, electrical laboratory 19, 790
Strontium, atomic weight of, 17, 203: and barium, estimation of, in
silicate analysis, 16, 83: and barium, occurrence of, in silicate
rocks, 16, 81: separation of, from barium (abst.), - 12, 118, 410
Strontium chloride, volatility of, 19, 156: hydroxide, preparation of
(abst.), 7, 65: palladium bromide, 16, 467: ruthenocyanide, 20, 29:
sulphate, crystallized, see Celestine; sulphate, reproduction of, by
wet process (abst.), 10, 113: titanate (abst.), 8, 178: trinitride, - 20, 228
Structure, molecular, of carbon compounds, relation to absorption
spectra (abst.), 4, 144
Strychnine (abst.), 6, 92: and brucine, physiological action of (abst.),
7, 116: detection of, in an exhumed body, 16, 108: experiments on
(abst.), 7, 116: and morphine, separation of, from fatty matters
(abst.), 9, 15: note on the test for, 15, 824: post-mortem detection
of, 16, 720: reaction for (abst.), 1, 341: reaction of, with iodic acid
or, 20, 120. Teaction for (abst.), 1, 311. Teaction of, with forthe action

(abst.), 1, 545: researches upon (abst.), 1, 273
Strychnine, bromo-, crystallography of (abst.), 7, 117
Styphnic acid, constitution of (abst.), 6, 287
Styrolene, rotary power of (abst.), 1, 279
Styrolene bromide, transformation of, into methyl benzoate (abst.), 2, 92
Suberic acid, bromine substitution products of (abst.), 4, 204: and
sebacic acids, formation of, from crude fatty acids (abst.), 4, 233
Substitution depending on atomic magnitude of reacting bodies
(abst.), 12, 167; law of, in naphthalene series (abst.), - 4, 206
Succinic acid, amidobenzoic acid derivatives of (abst.), 7, 202: prepa-
ration of, from tartaric acid (abst.), 4, 205 Succinic acid, $\alpha$ -methylhydroxy-, production of (abst.), 2, 342: propyl-
and iso proper (abot ) 4. area tetramethyl (abot )
and iso-propyl- (abst.), 4, 270: tetramethyl- (abst.), - 12, 157
Succinic acid series, formation of anhydrides in (abst.), - 12, 157
iso-Succinic acid, condensation products of, with benzaldehyde
(abst.), 5, 237
Succinic anhydrides, decomposition of mono-substituted (abst.), 5, 18:
fermentation (abst.) 1, 273
Succinimide, 16, 433: heat of solution of, in water and in alcohol, - 18, 156
Succinyl compounds of toluidine (abst.), 1, 160, 397
Sucrose, action of acetic and hydrochloric acids on, 17, 320: determi-
nation of, in presence of glucose 17, 312
Sugar, absorption of, by bone black, I, 509: action of bone black on
solutions of, 1, 468: action of nitric acid on, 9, 45: analysis of,
gravimeter for, 16, 677: analysis of, singular process of, 7, 42:
beet, reducing substances in raw (abst.), 10, 38: commercial
valuation of, 1, 514: in corn-stalks and melons, 1, 420: crystal-
lizable, determination of, in the beet, 16, 266: determination of,
with ammoniacal copper solution (abst.), 1, 109, 547: deter-
mination of, by means of polariscope, 1, 2: determination of,
volumetric (abst.), 1, 109: development of, in sorghums, 2, 75:
inversion of, by salts, 18, 120, 693: inverted, influence of tem-
perature on polarization of, 1, 26: inverted, sweetness of (abst.),
1, 182: neutral and inverted (abst.), 1, 488: neutral, or inactive
glucose (abst.), 2, 364: neutral (inactose) (abst.), 10, 16: of milk,
partial synthesis of (abst.), 1, 89: new process for rapid estimation
of, etc., 1, 205: palm, analysis of (abst.), 1, 488: pine tree, 13, 228:
raw, and cane juice, occurrence of aconitic acid in, P. 1, 220: re-
ducing action of different kinds of, on alkaline copper solutions
(abst.), 1, 342: reducing, determination of, in terms of cupric ox-
ide, 18, 749: in Symphoricarpus racemosa (abst.), 7, 208: test
limits for detection of metals in, 2, 337
Sugar beet, on the (abst.), 5, 118, 119, 119
Sugar beets, experiments with, P. 2, 56
Sugar group, synthetical experiments in (abst.), 9, 191: syntheses in,
12, 340, 400, 461

Sugar-cane, amide of, additional notes on, 20, 133: amines in juice of,
18, 743: effect of clarification of juice of, 19, 56: experiments with
fertilizers upon, 1, 416: estimation of juice extracted from, 17,
920: the lecithins of, 20, 113: in Louisiana, experiments with, P.
2, 52: principal amide of, 19, 881
Sugars, beet, vanillin in certain unrefined (abst.), 2, 368: cane and in-
vert, action of light and heat on (abst.), 5, 232: in condensed
milk, estimation of, 15, 668: contributions to the knowledge of
certain kinds of (abst.), 1, 162: determination of, by copper po-
tassium carbonate solution (abst.), 12, 226: different kinds of,
method for determination of (abst.), 9, 36: in food-stuffs, estima-
tion of, 19, 190: of hesperidine and isohesperidine (abst.), 10, 79:
reactions of, with oxalic anhydride (abst.), I, 100: recent work
on, 16, 549, 670: reduction of cupric salts by (abst.), 10, 189: and
solid hydrocarbons, heat of combustion of (abst.), 9, 112: and
syrups, incineration of, without sulphuric acid (abst.), - 12, 18
Suint, composition of (abst.), 8, 185: and fuller's grease, preparation
of soap from (abst.), 8, 87: volatile acids of (abst.), - 9, 173
Suint waters, transformations produced in (abst.), 8, 203
Sulphamine-m-toluic acid, oxidation of (abst.), 2, 369
o-Sulphaminebenzoic acid. See Saccharin.
Sulphanilic acid (abst.), 2, 291
Sulphates, action of heat on, 5, 178: researches upon (abst.), 1, 278:
volumetric determination of (abst.), 12, 72
Sulphides, action of heat on, 5, 178: of alcoholic radicals, action of
chlorine on (abst.), 10, 16: alkaline, action of nitrates on (abst.),
6, 142: conversion of, into sulphates by means of nitric and hy-
drobromic acids (abst.), 6, 33: determination of, in presence of
sulphite and thiosulphate in solution (abst.), 4, 160: metallic, ac-
tion of acid vapors on, 18, 1096: metallic, action of ammonium
salts upon (abst.), 1, 331, 388: of phosphorus (abst.), 6, 189: pro-
duced by compression of their elements (abst.), 6, 190: use of bro-
mine for decomposing (abst.), 9, 35
Sulphines, researches on (abst.) 10, 82
Sulphinide, new term proposed (abst.), 2, 222
Sulphites, action of heat on, 5, 193: determination of (abst.), 1, 89: de-
termination of, in presence of sulphides and thiosulphates (abst.),
4, 160: qualitative test for, in the presence of thiosulphates and
o-Sulphobenzoic acid (abst.), 2, 222
Sulphobenzoic acid, nitro- (abst.), 2, 44
Sulphocarbanilide, bodies produced by action of alkyl iodides on
(abst.), 4, 230
Sulphocarbonates, priority in methods of preparing (abst.), - 6, 37
Sulphocyanacetone (abst.), 5, 122
Sulphocyanates, heat of formation of some (abst.) 4, 234

Sulphocyanic acid, heat of formation of (abst.), 4, 234
Sulphocyanogen and selenocyanogen compounds (abst.), - 12, 231
Sulphocyanpropimine (abst.), 5, 122
Sulphones, formation of, from alkylsulphonated fatty acids (abst.), 7, 203
Sulphonic acids, aromatic, action of fused alkalies upon (abst.), 2,
294: formation of, from sulphones (abst.), 1, 293, 393 Sulphonic compounds, action of chlorine on (abst.), 4, 263
Sulphur, burning of, with white phosphorescent flame (abst.), 5, 65:
in casein, amount of (abst.), 8, 60: color of vapor of, 20, 757: new
combination of carbon and bromine with (abst.), 4, 226: com-
pounds of, occurring in the manufacture of caustic soda, oxida-
tion of (abst.), 6, 28: influence of, on Eggertz' test for carbon in
iron (abst.), 10, 115; organic compounds containing, action of
chlorine on (abst.), 6, 133: new oxyacid of (abst.), 10, 76: oxy-
gen, and halogens, combined with hydrogen, reciprocal displace-
ments of (abst.), 1, 385: recovery of (abst.), 2, 289: recovery of
from alkali waste (abst.), 10, 90: relative activity of the haloid
derivatives of (abst.), 8, 164: solubility of, in acetic acid (abst.),
1, 99: sublimation of (abst.), 8, 20: and zinc dust, experiments
with (abst.), 5, 53
Sulphur chloride, action of, on oils (abst.), 10, 116: chloride, action of,
on minerals, 20, 289: chloride, action of, on silver cyanide (abst.),
7, 201: dioxide, action of, on nitric oxide (abst.), 4, 72: dioxide,
apparatus for preparing (abst.), 9, 175: dioxide, some reactions of
(abst.), 7, 286: new oxychloride of (abst.), 4, 231: oxychloride,
action of, on alcohols (abst.), 2, 136: oxychloride, vapor density
of one (abst.), 4, 78: oxychlorides (abst.), 2, 61: oxychlorides,
action of, on silver nitrate (abst.), 4, 223: salts derived from phos-
phorus trisulphide (abst.), 6, 76: tetrachloride, combination of
auric chloride with (abst.), 8, 20
Sulphur, determination of, in asphalt, 20, 882: in calcium carbide, 18,
740: in coal, P. 1, 97: in coal, methods for, 20, 630: in coke, 10,
155: in copper, native, 6, 241: in copper, refined, 17, 814: in iron,
19, 114: in iron, standard solution of iodine for, 16, 112: in cast
iron, 18, 1079: in cast iron, white, as hydrogen sulphide, 17, 891: in pig iron, Drown's method for, 18, 406: in iron and steel, new
apparatus for, 19, 581: in pig iron and steel, 19, 106: in steel, appa-
ratus for, 19, 288: in steel, two methods for (abst.), 10, 84: in
metallurgical products, ores, and fuel (abst.), 1, 560: in oils
(abst.), 10, 44: in organic compounds, new method for (abst.),
(claim of priority), 1, 487, 542: in proteids (abst.), 8, 60: in
pyrites, 16, 398; 17, 181, 397, 772; 18, 446, 685: in pyrites (abst.),
4, 161: in sulphides (abst.), 1, 540: in sulphides, natural (abst.),
1, 487: in vulcanized rubber (abst.), 7, 178  Sulphur determinations, in albumin (abst.), 12, 176: standard iodine
solution for, 19, 261
Sulphuretted hydrogen. See Hydrogen sulphide.
bulbandary and some poor any and sent parisher.

Sulphuric acid, action of, on bromodurene (abst.), 9, 215; action of, on cinchonine in the presence of oxalic acid (abst.), 10, 83: action of cold, on lead and its alloys, 5, 219: action of, at 100°, on lead and its alloys, 5, 224: action of, upon mercury, 19, 873; 20, 100: action of, on oleic acid (abst.), 8, 85: action of, on potassium iodide (abst.), 5, 232: action of, on quinol, and value of product as a developer, 13, 155; action of, on starch (abst.), 1, 101; behavior of, with nitrogen tetroxide (abst.), 4, 265: and calcium chloride, relative values of, as desiccating agents (abst.), 6, 98: concentrated, and copper, reaction of, 17, 904: on the concentration of (abst.), 6, 244: decomposition of, by mercury, 20, 515: determination of, 18, 682: determination of, as barium sulphate, effect of excess of reagent on, 18, 793: determination of, when combined with alkaline earths (abst.), 7, 251: determination of, by photometric method, 18, 661: determination of, volumetric (abst.), 1, 330: formation of, during the preparation of dithionic acid (abst.), 8, 177: improvements in manufacture of, 15, 624; 16, 498: influence of Glover's tower on the manufacture of (abst.), 7, 124: loss of nitre in the manufacture of (abst.), 6, 141: made in United States, 15, 563: moisture retained by gases dried by means of (abst.), 7, 295: normal percentage of, in wine (abst.), 1, 365: phenomenon in electrolysis of (abst.), 5, 232: presence of, in wine (abst.), 1, 365: purification of (abst.), 7, 244: reaction of chromic anhydride with (abst.), 4, 170: reaction of, with copper, 17, 904: reduction of, by copper, 18, 251: standardization of, 17, 351: table of specific gravity of, etc., P. 2, 26: titration of, for hyponitric acid, P. 2, 149; 1, 18; use of, for oxidizing, in place of nitric acid (abst.), 7, 211: in wine, on the (abst.), -1, 364 Sulphuric acid process, recent theories of, - 14, 24 Sulphurous acid, detection of, in wine (abst.), 4, 263: determination of (abst.), 6, 194: determination of, in wines (abst.), 4, 192, 205: purification of mineral oil with (abst.), 8, 206: and sulphites, acidimetric determination of (abst.), 8, 180: titration of (abst.), 6, 26 Sulphurous baths, observations on (abst.), 1, 389 Sunflower seeds, proteids of, -- - 18, 622; 19, 487 Sunlight, alleged decomposition of phosphorous anhydride by (abst.), 6, 44: decomposition of aqueous solutions of hypochlorous acid and of chlorine in (abst.), 7, 120: influence of, on germs of microbes (abst.), 7, 77: reduction of metallic oxides in, - - 4, 3 Superphosphates, on (abst.), 6, 244: free acid in (abst.), 9, 224: estimation of precipitated or reduced phosphoric acid in, P. 2, 64: estimation of water in (abst.), 12, 412: rate of reversion in, 6, 224: reversion of (abst.), 2, 131 Support, universal, for pocket spectroscope (abst.), - - 1, 379, 397
Supports of sheet iron for use with blowpipe, - - P. 2, 106 Surface tension, determination of molecular weight of liquids by means of. - 18, 514

Surface tensions of solutions of oxalic, tartaric, and citric acids,	20,	128
Surfaces, curved, apparatus for delineation of,	13,	263
Swallow's nests, composition of edible (abst.),	7,	289
Sweet potato, carbohydrates of (abst.),	12,	35 I
Symphoricarpus racemosa, sugar in (abst.),	7,	208
Synthesis of organic compounds by electrolysis (abst.), -	4,	239
Syrups and sugars, incineration of, without sulphuric acid (abst.),		18
Tables, specific gravity (abst.),		159
Taka diastase, notes on,		639
Talc, constitution of (abst.),		351
Tallow, adulteration of, with cotton-seed oil (abst.),		86
Tallow and butter, determination of specific gravity of (abst.),		205
Tan liquors, titration of free acid in (abst.),		367
Tank residues in copper refining, composition and formation of,		
Tannate, quinine, estimation of quinine in (abst.),		120
Tannic acid, comparison of several methods of determining, 4, 49, 62		120
contained in the berry of the sorbus tree (abst.), 9, 101: determina		
tion of (abst.), 7, 249: determination of, in tanning materials		0
4, 4: determination of, in wine (abst.), 4, 233: new test for (abst.),		182
Tannins, action of air on solutions of (abst.), 6, 171: determination of		
9, 52: (abst.), 4, 195: determination of, comparison of methods fo		
(abst.), 1, 102: determination of, improvements in (abst.), 6, 98		
determination of, by means of metallic oxides, 17, 811: determina		
tion of, in various vegetable substances (abst.), 6, 35: determina	-	
tion of, in wines (abst.), 4, 191: in kola, 19, 89: notes on Ham	-	
mer's method of estimating, 9, 56: notes on Loewenthal's method	f	
of estimating, 9, 63; 15, 560: standard solution of, action of ligh		
and darkness on,		
and darkness on,		246
	2,	246
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak	2,	
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,	2, , 20,	35
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)	2, 20, 6,	
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation o	2, 20, 6,	35 196
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,	2, 20, 6, of 16,	35 196
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separa	2, 20, 6, of 16,	35 196 247
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,	2, 20, 6, if 16,	35 196
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reactions of the same of th	2, 20, 6, of 16, -	35 196 247 48
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,	2, 20, 6, 16, 18,	35 196 247
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,  Tar from animal matters, substances contained in (abst.), 2, 97: coal	2, 20, 6, if 16, - 18,	35 196 247 48
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,  Tar from animal matters, substances contained in (abst.), 2, 97: coal cumarone of (abst.), 12, 162: coal, high boiling phenols in (abst.)	2, 20, 6, of 16, - 18,	35 196 247 48
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,  Tar from animal matters, substances contained in (abst.), 2, 97: coal cumarone of (abst.), 12, 162: coal, high boiling phenols in (abst.), 7, 57: coal, lutidine of (abst.), 6, 82: coal, occurrence of carboxylide.	2, 20, 6, of 16, - 18,	35 196 247 48
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,  Tar from animal matters, substances contained in (abst.), 2, 97: coal cumarone of (abst.), 12, 162: coal, high boiling phenols in (abst.), 7, 57: coal, lutidine of (abst.), 6, 82: coal, occurrence of carboxylic acids in (abst.), 7, 249: separation of benzene, toluene, etc., from	2, 20, 6, 16, 18, 18,	35 196 247 48
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,  Tar from animal matters, substances contained in (abst.), 2, 97: coal cumarone of (abst.), 12, 162: coal, high boiling phenols in (abst.), 7, 57: coal, lutidine of (abst.), 6, 82: coal, occurrence of carboxylic acids in (abst.), 7, 249: separation of benzene, toluene, etc., from (abst.), 6, 101: from Sutherland's gas producers, results of the	2, 20, 6, 16, 18, 18,	35 196 247 48
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,  Tar from animal matters, substances contained in (abst.), 2, 97: coal cumarone of (abst.), 12, 162: coal, high boiling phenols in (abst.), 7, 57: coal, lutidine of (abst.), 6, 82: coal, occurrence of carboxylic acids in (abst.), 7, 249: separation of benzene, toluene, etc., from (abst.), 6, 101: from Sutherland's gas producers, results of the examination of (abst.),	2, 20, 6, 16, 18, 18,	35 196 247 48
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,  Tar from animal matters, substances contained in (abst.), 2, 97: coal cumarone of (abst.), 12, 162: coal, high boiling phenols in (abst.), 7, 57: coal, lutidine of (abst.), 6, 82: coal, occurrence of carboxylic acids in (abst.), 7, 249: separation of benzene, toluene, etc., from (abst.), 6, 101: from Sutherland's gas producers, results of the examination of (abst.),  Tars, analytical examination of (abst.),	2, 20, 6, ff 16, 18,	35 196 247 48 532
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)	2, 20, 6, f 16, 18, 	35 196 247 48 532
Tannins, classification of, 20, 34: examination of (abst.), 6, 171: oak preparation of, 15, 344: oak bark, recent literature of,  Tanning extracts, examination of (abst.)  Tanning materials, composition of the ashes of, 20, 338: estimation of tannic acid in, 4, 4: qualitative determination of,  Tantalum, derivatives of, 18, 38: qualitative reactions of, 18, 50: separation of, from columbium,  Tantalum oxide, action of phosphorus pentachloride on, 18, 61: reaction of carbon tetrachloride with,  Tar from animal matters, substances contained in (abst.), 2, 97: coal cumarone of (abst.), 12, 162: coal, high boiling phenols in (abst.), 7, 57: coal, lutidine of (abst.), 6, 82: coal, occurrence of carboxylic acids in (abst.), 7, 249: separation of benzene, toluene, etc., from (abst.), 6, 101: from Sutherland's gas producers, results of the examination of (abst.),  Tars, analytical examination of (abst.),	2, 20, 6, f 16, 18, 	35 196 247 48 532

Tartaric acid, criticism of methods for determining (abst.), 10, 23: de-
composition of, in the presence of glycerol at a high temperature
(abst.), 8, 110: detection of, in wine (abst.), 1, 364: determination
of, in argols (abst.), 1, 102: determination of, in crude tartar, etc.,
(abst.), 7, 88: determination of, in lees and inferior argols (abst.),
1, 369: determination of, in wine (abst.), 6, 97: manufacture of
(abst.), 4, 292: preparation of succinic acid from (abst.), 4, 205:
products of dry distillation of (abst.), 4, 263: surface-tension of
Tartaric and citric acids, on (abst.), 5, 231
Tartaric glucoside (abst.), 6, 132
Tartrate, acid, estimation of potassium as, P. 1, 98: calcium acid, note
on, 13, 144: potassium acid, determination of (abst.), 7, 295: potas-
sium acid, determination of (abst.), 9, 120
Tartrates, influence of, on the digestion of albuminoids, 12, 394
Tautomeric compounds, determination of the constitution of (abst.), 12, 167
Tea, analyses of (abst.), 4, 189: Chinese, characteristics, detection of
adulterations (abst.), 1, 362: Japanese, analyses of (abst.), 6, 312:
Pekoe Ceylon, analysis of, 13, 237
Teaching of chemistry, 15, 463: relation of, to research, - 15, 665
Technical chemistry, opening address before section of, World's Con-
gress of chemists, 15, 545
Telluride ores, assay of, 20, 586
Tellurium atomic weight of 18, 208; 10, 267; (abst.) b. 120; com-
Tellurium, atomic weight of, 18, 208; 19, 367: (abst.), 6, 129: com-
pounds, reactions of (abst.), 5, 116: determination of, in copper
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reac-
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium,
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849. Tellurium dioxide, and its combinations with acids (abst.), 8, 163:
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849.  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849. Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116. Temperature, calorimetric determination of (abst.), 2, 371: correction
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849. Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, \$16. Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: in-
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849. Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, \$16. Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849. Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116. Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849.  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116.  Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26.  Temperature regulator (abst.), 1, 91
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 845  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116  Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26  Temperature regulator (abst.), 1, 91  Temperatures, critical, of liquids (abst.), 4, 264
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 845  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116  Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26  Temperature regulator (abst.), 1, 91  Temperatures, critical, of liquids (abst.), 4, 264
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849.  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116.  Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26.  Temperature regulator (abst.), 1, 91.  Temperatures, critical, of liquids (abst.), 4, 264.
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849.  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, \$16.  Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26.  Temperature regulator (abst.), 4, 264.  Terbium, spectrum of (abst.), 4, 223.  Terebenthic acid (abst.), 4, 223.
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849.  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, \$16.  Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26.  Temperature regulator (abst.), 4, 223.  Terebenthic acid (abst.), 4, 223.  Terebenthic acid (abst.), 4, 223.  Terepenes, chemistry of (abst.), 7, 121: contribution to the knowledge
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849: Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116: Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26: Temperature regulator (abst.), 4, 264: Terbium, spectrum of (abst.), 4, 223: Terebenthic acid (abst.), 4, 223: Terebenthic acid (abst.), 7, 121: contribution to the knowledge of (abst.), 7, 122: and essential oils (abst.), 7, 246: molecular re-
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849. Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, \$16. Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26. Temperature regulator (abst.), 1, 91. Temperatures, critical, of liquids (abst.), 4, 223. Terebenthic acid (abst.), 4, 223. Terebenthic acid (abst.), 4, 223. Terepenes, chemistry of (abst.), 7, 121: contribution to the knowledge of (abst.), 7, 122: and essential oils (abst.), 7, 246: molecular refraction of (abst.), 4, 173.
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849.  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, \$16  Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26  Temperature regulator (abst.), 1, 91  Temperatures, critical, of liquids (abst.), 4, 223  Terebenthic acid (abst.), 4, 223  Terebenthic acid (abst.), 7, 121: contribution to the knowledge of (abst.), 7, 122: and essential oils (abst.), 7, 246: molecular refraction of (abst.), 4, 173  Terpilene, optically active, transformation of oil of turpentine into
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849. Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, 116. Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26. Temperature regulator (abst.), 4, 223. Terebenthic acid (abst.), 4, 223. Terebenthic acid (abst.), 4, 223. Terebenthic acid (abst.), 4, 223. Terepenes, chemistry of (abst.), 7, 121: contribution to the knowledge of (abst.), 7, 122: and essential oils (abst.), 7, 246: molecular refraction of (abst.), 4, 173. Terpilene, optically active, transformation of oil of turpentine into (abst.), 8, 72: transformation of, into a menthene (abst.), - 10, 193.
pounds, reactions of (abst.), 5, 116: determination of, in copper bullion, 17, 280: different forms of (abst.), 10, 10: some new reactions of, 17, 853: and selenium, notes on, 19, 771: and selenium, separation of, and preparation of, from lead chamber deposit (abst.), 6, 47: separation of, from copper residues, - 17, 849.  Tellurium dioxide, and its combinations with acids (abst.), 8, 163: new oxide of (abst.), 5, 115: sulphoxide (abst.), - 5, \$16  Temperature, calorimetric determination of (abst.), 2, 371: correction of errors due to change of, in volumetric analysis, P. 1, 188: influence of, on reaction between barium chloride and potassium oxalate (abst.), 2, 346: influence of, in sugar polarization, - 1, 26  Temperature regulator (abst.), 1, 91  Temperatures, critical, of liquids (abst.), 4, 223  Terebenthic acid (abst.), 4, 223  Terebenthic acid (abst.), 7, 121: contribution to the knowledge of (abst.), 7, 122: and essential oils (abst.), 7, 246: molecular refraction of (abst.), 4, 173  Terpilene, optically active, transformation of oil of turpentine into

Tetrabrombenzene (abst.), 4, 175
Tetrabromdiacetyl, symmetrical (abst.), 12, 160
Tetrahedrite from Peru, analysis of (abst.), 1, 393
I:5-Tetrahydronaphthalenediamine, alicyclic, decomposition of, into
its optically active components (abst.), 12, 164
Tetrahydroquinoline (abst.), 5, 241
Tetrallylammonium bromide, preparation of, 1, 387
Tetramethylbenzidine (abst.), 6, 87
Tetramethyldiamidothiobenzophenone (abst.), 10, 40
Tetramethylethylene and its derivatives (abst.), 2, 54
Tetramethylsuccinic and trimethylglutaric acids (abst.), - 12, 157
Tetraphenylazine, a study of, 18, 112
Tetraphenylene, disulpho-, 13, 270
Tetraphenylethylene, preparation of (abst.), 10, 81
Tetraphenylmethane, on, 20, 773
Tetrathionate, potassium, experiments on (abst.), 4, 224
Tetrethylammonium bromoselenate, 20, 574
Thalleoquin test for quinine, modifications of, 19, 331 Thallin compounds, derivatives of p-quinanisoil (abst.), 7, 84
Thallium, atomic weight of, 16, 186; 17, 209: some new compounds
of, 18, 970: determination of (abst.), 12, 17: electrolysis of pyro-
phosphate of (abst.), 12, 172
Thallium oxides, action of hydrogen dioxide on (abst.), - 2, 50
/Til 11 1 - 4 : i d
Thallous platinocyanide, 18, 976: tellurate, 18, 975: thallic trinitride,
18, 973: trinitride, 18, 970
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365:
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264
18, 973: trinitride,  18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.),  4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: re-
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34
18, 973: trinitride,  18, 970  Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.),  4, 264  Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.),  Thermo-electric elements, electromotive forces and resistance of
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34 Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34 Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585 Thermometer, air, new form of, for technical purposes, 12, 277: for
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34 Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585 Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial, 16, 396
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34 Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585 Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial, 16, 396 Thermometers, official methods for verifying, 20, 921: rise of freezing-
18, 973: trinitride, 18, 970  Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264  Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34  Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585  Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial, 16, 396  Thermometers, official methods for verifying, 20, 921: rise of freezing-point in (abst.), 12, 413
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34 Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585 Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial, 16, 396 Thermometers, official methods for verifying, 20, 921: rise of freezing-
18, 973: trinitride, 18, 970  Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264  Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34  Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585  Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial, 16, 396  Thermometers, official methods for verifying, 20, 921: rise of freezing-point in (abst.), 12, 413
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34 Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585 Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial, 16, 396 Thermometers, official methods for verifying, 20, 921: rise of freezing- point in (abst.), 12, 413 Thermometry, use of argon in, 7, 92
18, 973: trinitride,  Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.),  Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.),  Thermo-electric elements, electromotive forces and resistance of (abst.),  Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial,  Thermometers, official methods for verifying, 20, 921: rise of freezing- point in (abst.),  Thermometry, use of argon in,  Thermoregulator (abst.),  7, 92
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34 Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585 Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial, 16, 396 Thermometers, official methods for verifying, 20, 921: rise of freezing- point in (abst.), 12, 413 Thermometry, use of argon in, 7, 92 Thermostat, delicate (abst.), 7, 92
18, 973: trinitride, 18, 970 Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365: determination of, in kola, 19, 87: transformation of xanthine into (abst.), 4, 264 Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34 Thermo-electric elements, electromotive forces and resistance of (abst.), 1, 585 Thermometer, air, new form of, for technical purposes, 12, 277: for high temperatures, improved mercurial, 16, 396 Thermometers, official methods for verifying, 20, 921: rise of freezing- point in (abst.), 12, 413 Thermometry, use of argon in, 17, 477 Thermoregulator (abst.), 7, 92 Thermostat, delicate (abst.), 17, 338
18, 973: trinitride,
18, 973: trinitride, 18, 970  Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365:     determination of, in kola, 19, 87: transformation of xanthine into     (abst.), 4, 264  Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34  Thermo-electric elements, electromotive forces and resistance of     (abst.), 1, 585  Thermometer, air, new form of, for technical purposes, 12, 277: for     high temperatures, improved mercurial, 16, 396  Thermometers, official methods for verifying, 20, 921: rise of freezing-     point in (abst.), 12, 413  Thermometry, use of argon in, 17, 477  Thermoregulator (abst.), 7, 92  Thiacetic acid a substitute for hydrogen sulphide in qualitative analy-     sis, 17, 338  Thialdine, oxidation of, with nitric acid (abst.),
18, 973: trinitride, 18, 970  Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365:     determination of, in kola, 19, 87: transformation of xanthine into     (abst.), 4, 264  Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34  Thermo-electric elements, electromotive forces and resistance of     (abst.), 1, 585  Thermometer, air, new form of, for technical purposes, 12, 277: for     high temperatures, improved mercurial, 16, 396  Thermometers, official methods for verifying, 20, 921: rise of freezing-     point in (abst.), 12, 413  Thermometry, use of argon in, 17, 477  Thermoregulator (abst.), 17, 92  Thiacetic acid a substitute for hydrogen sulphide in qualitative analy-     sis, 17, 338  Thialdine, oxidation of, with nitric acid (abst.), 1, 555  Thiamides and amidines of monobasic organic acids (abst.), - 2, 188
18, 973: trinitride, 18, 970  Theobromine, determination of, in cocoa and chocolate (abst.), 1, 365:     determination of, in kola, 19, 87: transformation of xanthine into     (abst.), 4, 264  Thermochemical data (abst.), 2, 88: investigations, (abst.), 1, 293: results, remarks on (abst.), 6, 34  Thermo-electric elements, electromotive forces and resistance of     (abst.), 1, 585  Thermometer, air, new form of, for technical purposes, 12, 277: for     high temperatures, improved mercurial, 16, 396  Thermometers, official methods for verifying, 20, 921: rise of freezing-     point in (abst.), 12, 413  Thermometry, use of argon in, 17, 477  Thermoregulator (abst.), 17, 378  Thiacetic acid a substitute for hydrogen sulphide in qualitative analysis, 17, 338  Thialdine, oxidation of, with nitric acid (abst.), 1, 555  Thiamides and amidines of monobasic organic acids (abst.), - 2, 188  Thiocarbamate of ammonium, use of, in analytical work (abst.), 9, 115

Thioformanilide, action of heat on (abst.), 4, 206
Thioformanilide, action of heat on (abst.), 4, 206 Thiophen, preparation of, 12, 83: synthesis of (abst.), 7, 206, 230
o-Thiophendicarboxylic acid and o-thioxen (abst.), 9, 193
Thiophosphoryl chloride, action of, on silver nitrate (abst.), - 4, 224
Thiosulphate, determination of, in presence of sulphide and sulphite
(abst.), 4, 160
Thiosulphates, conversion of, into sulphates by means of potassium
permanganate (abst.), 6, 96: determination of (abst.), - 1, 89
Thiourea, action of alcoholic potassium hydroxide on (abst.), 8, 166:
compound, a new, I, 415: transformation of carbon oxysulphide
into (abst.), 4, 236
Thioxalate, ethyl (abst.), 5, 236
o-Thioxen and o-thiophendicarboxylic acid (abst.), 9, 193
Thollon's spectroscope, note on (abst.), I, 172
Thomas slag, adulteration of (abst.), 12, 413: determination of phos-
phorus in (abst.), 9, 118
Thorite, mineral resembling, analysis of, 2, 73 Thorium, atomic weight of (abst.), 5, 118: estimation of, 18, 782: sep-
aration of, from iron, 20, 846: separation of, from other rare
earths, by means of potassium trinitride, 18, 947 Thorium dioxide, action of phosphorus pentachloride upon, 17, 654:
oxide (abst.), 7, 285: tetrabromide, derivatives of, 20, 839: tetra-
chloride, derivatives of, 20, 815
Thymenesulphonic acid, combination of, with diazo compounds, 3, 112: and some of its salts, 3, 103, 110
·
Thymol, synthesis of, from cuminol (abst.), 4, 205
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reac-
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of,
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.),
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5,
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: deter-
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, elec-
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, electrolytic, in tin ores, 20, 687: determination of, in tin slags (abst.),
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, electrolytic, in tin ores, 20, 687: determination of, in tin slags (abst.), 7, 210: electrolysis of pyrophosphate of (abst.), 12, 171: a grey
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, electrolytic, in tin ores, 20, 687: determination of, in tin slags (abst.), 7, 210: electrolysis of pyrophosphate of (abst.), 12, 171: a grey modification of (abst.), 1, 494: occurrence of, in canned food, 13,
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, electrolytic, in tin ores, 20, 687: determination of, in tin slags (abst.), 7, 210: electrolysis of pyrophosphate of (abst.), 12, 171: a grey modification of (abst.), 1, 494: occurrence of, in canned food, 13, 200: organometallic compounds of (abst.), 1, 399
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, electrolytic, in tin ores, 20, 687: determination of, in tin slags (abst.), 7, 210: electrolysis of pyrophosphate of (abst.), 12, 171: a grey modification of (abst.), 1, 494: occurrence of, in canned food, 13, 200: organometallic compounds of (abst.), 1, 399 Tin, separation of, from antimony (abst.), 8, 76; 9, 11: from antimony,
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, electrolytic, in tin ores, 20, 687: determination of, in tin slags (abst.), 7, 210: electrolysis of pyrophosphate of (abst.), 12, 171: a grey modification of (abst.), 1, 494: occurrence of, in canned food, 13, 200: organometallic compounds of (abst.), 1, 399 Tin, separation of, from antimony (abst.), 8, 76; 9, 11: from antimony, volumetric (abst.), 8, 200: from antimony and arsenic (abst.), 8,
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, electrolytic, in tin ores, 20, 687: determination of, in tin slags (abst.), 7, 210: electrolysis of pyrophosphate of (abst.), 12, 171: a grey modification of (abst.), 1, 494: occurrence of, in canned food, 13, 200: organometallic compounds of (abst.), 1, 399 Tin, separation of, from antimony (abst.), 8, 76; 9, 11: from antimony, volumetric (abst.), 8, 200: from antimony and arsenic (abst.), 1, 483;
Thymol, synthesis of, from cuminol (abst.), 4, 205 Thymol and resorcinol, reactions of (abst.), 12, 502 Tiglic and angelic acids, constitution of (abst.), 1, 241: contributions to the knowledge of (abst.), 1, 240 Tin, new acid of (abst.), 10, 187: alloys of, with antimony, arsenic and lead, analysis of, 17, 869: alloys of, with lead, blowpipe reactions of, P. 2, 108: alloys of, with lead, commercial valuation of, 16, 451: alloys of, with lead, specific heat of (abst.), 8, 197: atomic weight of, 17, 210: behavior of chlorosulphonic acid with (abst.), 4, 261: combinations of disulphides and diselenides of (abst.), 5, 117: detection of, in presence of antimony (abst.), 4, 168: determination of, in aluminum solders, 18, 777: determination of, electrolytic, in tin ores, 20, 687: determination of, in tin slags (abst.), 7, 210: electrolysis of pyrophosphate of (abst.), 12, 171: a grey modification of (abst.), 1, 494: occurrence of, in canned food, 13, 200: organometallic compounds of (abst.), 1, 399 Tin, separation of, from antimony (abst.), 8, 76; 9, 11: from antimony, volumetric (abst.), 8, 200: from antimony and arsenic (abst.), 8,

mercury, 15, 204: from titanium (abst.), 12, 175: from tungsten
(abst.), 9, 200
Tin, phosphor-, analysis of, 19, 396
Tin+, photo-chemical estimation of (abst.), 10, 86
Tintometer (abst.), 10, 115
Titanates of barium and strontium (abst.), 8, 178
Titanic acid, test for (abst.), 7, 210: volatility of, 20, 467: volumetric
determination of, in iron ores, 17, 878
Titaniferous iron ores, analysis of (abst.), 4, 164
Titanium in blast furnaces, 12, 91: in clays (discussion), 18, 914: detec-
tion and estimation of (abst.), 5, 54: determination of, in alu-
minum alloys, 18, 775: determination of, by hydrogen peroxide,
13, 210: determination of, in iron ores (abst.), 4, 165: error in de-
termining, due to presence of fluorine, 17, 718: occurrence of, 18,
402: separation of, from iron, 16, 427; 20, 513, 854: separation of,
from tin, 12, 175
Titanium rubidium fluoride, 18, 58
Titanium tetrachloride, action of, on acetic acid and acetic anhydride
(abst.), 2, 363: compound of, with acetyl chloride (abst.), 2, 430:
compound of, with ethyl oxide (abst.) 2, 434: compound of, with
phosphorus trichloride (abst.), 2, 434
Tobacco, estimation of nicotine in, 2, 338
Tobacco and tea Japanese (abst.), 6, 312
Tolane, hydration of (abst.), 10, 83
Tolane, hydration of (abst.), 10, 83 Toluene and benzene, action of methylene chloride on (abst.), 6, 163;
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:
Toluene and benzene, action of methylene chloride on (abst.), 6, 163: and methyl chloride in presence of aluminum chloride, hydrocar-
Toluene and benzene, action of methylene chloride on (abst.), 6, 163: and methyl chloride in presence of aluminum chloride, hydrocar- bons formed from (abst.), 1, 280, 398: separation of, from crude
Toluene and benzene, action of methylene chloride on (abst.), 6, 163: and methyl chloride in presence of aluminum chloride, hydrocar- bons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by
Toluene and benzene, action of methylene chloride on (abst.), 6, 163: and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naplitha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397
Toluene and benzene, action of methylene chloride on (abst.), 6, 163: and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397 Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of,
Toluene and benzene, action of methylene chloride on (abst.), 6, 163: and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.),
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bront-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-(abst.), 5, 61
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-(abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy- (abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 1, 287
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-(abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  Toluic acid, sulphamine-m-, oxidation of, 2, 369
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy- (abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  o-Toluic acid, sulphamine-m-, oxidation of, 6, 163
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy- (abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  o-Toluic acid, sulphamine-m-, oxidation of, 2, 369  o-Toluic acid, nitro- (abst.), 6, 163  Toluidine, compounds of, with naphthoquinone (abst.), 5, 19: com-
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-(abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  o-Toluic acid, sulphamine-m-, oxidation of, 2, 369  o-Toluic acid, nitro- (abst.), 6, 163  Toluidine, compounds of, with naphthoquinone (abst.), 1, 165: intro-
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy- (abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  o-Toluic acid, sulphamine-m-, oxidation of, 2, 369  o-Toluic acid, nitro- (abst.), 6, 163  Toluidine, compounds of, with naphthoquinone (abst.), 5, 19: compounds of nickel and cobalt chlorides with (abst.), 1, 165: introduction of methyl or ethyl groups into (abst.), 5, 64: succinyl
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-(abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  o-Toluic acid, sulphamine-m-, oxidation of, 2, 369  o-Toluic acid, nitro- (abst.), 6, 163  Toluidine, compounds of, with naphthoquinone (abst.), 5, 19: compounds of nickel and cobalt chlorides with (abst.), 1, 165: introduction of methyl or ethyl groups into (abst.), 5, 64: succinyl compounds of (abst.), 1, 160, 397: nitro-, a new (abst.), 7, 174:
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-(abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  o-Toluic acid, sulphamine-m-, oxidation of, 2, 369  o-Toluic acid, nitro- (abst.), 6, 163  Toluidine, compounds of, with naphthoquinone (abst.), 5, 19: compounds of nickel and cobalt chlorides with (abst.), 1, 165: introduction of methyl or ethyl groups into (abst.), 5, 64: succinyl compounds of (abst.), 1, 160, 397: nitro-, a new (abst.), 7, 174: oxypropyl- (abst.), 5, 29, 58
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-(abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  o-Toluic acid, sulphamine-m-, oxidation of, 2, 369  o-Toluic acid, nitro-(abst.), 6, 163  Toluidine, compounds of, with naphthoquinone (abst.), 5, 19: compounds of nickel and cobalt chlorides with (abst.), 1, 165: introduction of methyl or ethyl groups into (abst.), 5, 64: succinyl compounds of (abst.), 1, 160, 397: nitro-, a new (abst.), 7, 174: oxypropyl- (abst.), 5, 29, 58  o-Toluidine, compounds of, with metallic salts, 5, 29, 58
Toluene and benzene, action of methylene chloride on (abst.), 6, 163:  and methyl chloride in presence of aluminum chloride, hydrocarbons formed from (abst.), 1, 280, 398: separation of, from crude tar, naphtha, and crude benzenes (abst.), 6, 101: syntheses by action of metallic chlorides upon (abst.), 1, 397  Toluene, amidooctyl- (abst.), 7, 176: bronn-p-ethyl-, oxidation of, 1, 284: nitro-, presence of m-nitrotoluene in commercial (abst.), 1, 486: o-nitro-, production of anthranilic acid from (abst.), - 2, 227  Toluenes, iso-butyl-o-amido-, isomeric (abst.), 7, 88: dihydroxy-(abst.), 5, 61  o-Toluenesulphamide, oxidation of (abst.), 2, 221  Toluenesulphonchloride (abst.), 2, 369  o-Toluic acid, sulphamine-m-, oxidation of, 2, 369  o-Toluic acid, nitro- (abst.), 6, 163  Toluidine, compounds of, with naphthoquinone (abst.), 5, 19: compounds of nickel and cobalt chlorides with (abst.), 1, 165: introduction of methyl or ethyl groups into (abst.), 5, 64: succinyl compounds of (abst.), 1, 160, 397: nitro-, a new (abst.), 7, 174: oxypropyl- (abst.), 5, 29, 58  o-Toluidine, compounds of, with metallic salts, 5, 29, 58

acetic acid, formation of $p$ -toluyl- $p$ -methylimisatin from (abst.),
7, 205: and p-nitrobenzaldehyde, condensation products from
(abst.), 10, 41
p-Toluidine- dinitro- (abst.), 2, 224
Toluidines, action of cyanogen on (abst.), 6, 38
Toluylenediamine, a new (abst.), 7, 174
p-Toluyl-p-methylimisatin, formation of, from dichloracetic acid and
p-toluidine (abst.), 7, 205
Tolyl compounds, substituted, 2, 199
Tolylmethylketone (abst.), 4, 206
Topaz, carbon dioxide in cavities of, 3, 41
Torsion viscosimeter, 15, 173: standardizing of, 15, 454
Toxic effects of the lower fatty acids (abst.), 8, 229
Treasurer's report, 1876, P. 1, 178: 1883, 6, 2: 1884, 7, 2: 1885, 8, 2:
1886, 9, 2: 1887, 10, 1: 1888, 11, 58: 1889, 12, 2: 1890, 13, 65: 1891,
14, 3: 1892, 15, 60: 1893, 16, 75: 1894, 17, (13): 1895, 18, (14): 1896,
19, (6): 1897, 20, (14)
Triacetonealkamine, note on (abst.), 5, 134
Triallylamine, preparation of (abst.), 1, 387
Tribromaniline, action of nitric acid on (abst.), 4, 265
Tricalcium phosphate, transformation of, into phosphorus oxychlo-
ride (abst.), 5, 120
Trichloracetate, potassium, action of potassium cyanide on (abst.), 4, 231
Trigonelline (abst.), 9, 215
Trimethylamine, action of, on carbon disulphide (abst.), 1, 294: com-
mercial, composition of (abst.), 1, 398: manufacture of cyanides
and ferrocyanides from (abst.), 6, 199: separation of, from ammo-
19 670
nia, 18, 670
Trimethylammonium bromoselenate, 20, 574
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by-
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of,
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890
Trimethylammonium bromoselenate, 20,574  Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17,890: glycol, occurrence of, in glycerol, 17,890  Trimethylene ring, on the existence of (abst.), 7, 32
Trimethylammonium bromoselenate, 20, 574  Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890  Trimethylene ring, on the existence of (abst.), 7, 32  Trimethyleneformic acid (abst.), 6, 84
Trimethylammonium bromoselenate, 20, 574  Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890  Trimethylene ring, on the existence of (abst.), 6, 84  Trimethylethylene and its derivatives (abst.), 2, 54
Trimethylammonium bromoselenate, 20, 574  Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890  Trimethylene ring, on the existence of (abst.), 6, 84  Trimethylethylene and its derivatives (abst.), 2, 54  Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157
Trimethylammonium bromoselenate, 20, 574  Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890  Trimethylene ring, on the existence of (abst.), 6, 84  Trimethylethylene and its derivatives (abst.), 2, 54  Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157  Trinitrides, crystallographic notes on, 200, 229
Trimethylammonium bromoselenate, 20, 574  Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890  Trimethylene ring, on the existence of (abst.), 6, 84  Trimethyleneformic acid (abst.), 6, 84  Trimethylethylene and its derivatives (abst.), 2, 54  Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157  Trinitrides, crystallographic notes on, 20, 229  Triphenodioxazine by oxidation of o-amidophenol (abst.), 12, 162
Trimethylammonium bromoselenate, 20, 574  Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890  Trimethylene ring, on the existence of (abst.), 6, 84  Trimethylethylene and its derivatives (abst.), 2, 54  Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157  Trinitrides, crystallographic notes on, 20, 229  Triphenodioxazine by oxidation of o-amidophenol (abst.), 12, 162  Triphenylbrommethane, a periodide of, 20, 790
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890 Trimethylene ring, on the existence of (abst.), 6, 84 Trimethyleneformic acid (abst.), 6, 84 Trimethylethylene and its derivatives (abst.), 2, 54 Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157 Trinitrides, crystallographic notes on, 20, 229 Triphenodioxazine by oxidation of σ-amidophenol (abst.), 12, 162 Triphenylbrommethane, a periodide of, 20, 790 α-Triphenylguanidine, physical property of (abst.), 8, 203
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a byproduct in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890 Trimethylene ring, on the existence of (abst.), 6, 84 Trimethyleneformic acid (abst.), 6, 84 Trimethylethylene and its derivatives (abst.), 2, 54 Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157 Trinitrides, crystallographic notes on, 20, 229 Triphenodioxazine by oxidation of σ-amidophenol (abst.), - 12, 162 Triphenylbrommethane, a periodide of, 20, 790 α-Triphenylguanidine, physical property of (abst.), - 8, 203 Triphenylmethane, hydrazo- and azo-derivatives of, 20, 780: violet de-
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890 Trimethylene ring, on the existence of (abst.), 6, 84 Trimethyleneformic acid (abst.), 6, 84 Trimethylethylene and its derivatives (abst.), 2, 54 Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157 Trinitrides, crystallographic notes on, 20, 229 Triphenodioxazine by oxidation of σ-amidophenol (abst.), 12, 162 Triphenylbrommethane, a periodide of, 20, 790 α-Triphenylguanidine, physical property of (abst.), 8, 203 Triphenylmethane, hydrazo- and azo-derivatives of, 20, 780: violet derivatives of (abst.), 5, 241; 6, 85
Trimethylammonium bromoselenate, 20, 574  Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a byproduct in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890  Trimethylene ring, on the existence of (abst.), 6, 84  Trimethyleneformic acid (abst.), 6, 84  Trimethylethylene and its derivatives (abst.), 2, 54  Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157  Trinitrides, crystallographic notes on, 20, 229  Triphenodioxazine by oxidation of σ-amidophenol (abst.), 12, 162  Triphenylbrommethane, a periodide of, 20, 790  α-Triphenylguanidine, physical property of (abst.), 8, 203  Triphenylmethane, hydrazo- and azo-derivatives of, 20, 780: violet derivatives of (abst.), 5, 241; 6, 85  Tri- and diphenylphosphine (abst.), 5, 241; 6, 85
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a byproduct in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890 Trimethylene ring, on the existence of (abst.), 6, 84 Trimethyleneformic acid (abst.), 6, 84 Trimethylethylene and its derivatives (abst.), 2, 54 Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157 Trinitrides, crystallographic notes on, 20, 229 Triphenodioxazine by oxidation of σ-amidophenol (abst.), 12, 162 Triphenylbrommethane, a periodide of, 20, 790 α-Triphenylguanidine, physical property of (abst.), 8, 203 Triphenylmethane, hydrazo- and azo-derivatives of, 20, 780: violet derivatives of (abst.), 5, 241; 6, 85 Tri- and diphenylphosphine (abst.), 5, 22 Triphylite, analyses of (abst.), 5, 22
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a by- product in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890 Trimethylene ring, on the existence of (abst.), 6, 84 Trimethyleneformic acid (abst.), 6, 84 Trimethylethylene and its derivatives (abst.), 2, 54 Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157 Trinitrides, crystallographic notes on, 20, 229 Triphenodioxazine by oxidation of σ-amidophenol (abst.), 12, 162 Triphenylbrommethane, a periodide of, 20, 790 α-Triphenylguanidine, physical property of (abst.), 8, 203 Triphenylmethane, hydrazo- and azo-derivatives of, 20, 780: violet derivatives of (abst.), 5, 241; 6, 85 Tri- and diphenylphosphine (abst.), 5, 22 Triphylite, analyses of (abst.), 5, 21 Trithiacetaldehydes (abst.),
Trimethylammonium bromoselenate, 20, 574 Trimethylene bromide, preparation of (abst.), 2, 181: glycol, a byproduct in glycerol manufacture, 17, 890: glycol, occurrence of, in glycerol, 17, 890 Trimethylene ring, on the existence of (abst.), 6, 84 Trimethyleneformic acid (abst.), 6, 84 Trimethylethylene and its derivatives (abst.), 2, 54 Trimethylglutaric and tetramethylsuccinic acids (abst.), 12, 157 Trinitrides, crystallographic notes on, 20, 229 Triphenodioxazine by oxidation of σ-amidophenol (abst.), 12, 162 Triphenylbrommethane, a periodide of, 20, 790 α-Triphenylguanidine, physical property of (abst.), 8, 203 Triphenylmethane, hydrazo- and azo-derivatives of, 20, 780: violet derivatives of (abst.), 5, 241; 6, 85 Tri- and diphenylphosphine (abst.), 5, 22 Triphylite, analyses of (abst.), 5, 22

Tropidine (abst.), 2, 225
Tropine (abst.), 4, 226; 4, 264  Tubercles, root, in water culture, 20, 9
Tuberculosis bacilli, fats contained in, 18, 449: mineral constituents of
20, 618: some products of, 19, 782  Tuberin, a globulin of the potato, 18, 578
Tubes for withstanding high pressures (abst.), 10, 69: sealed, appara-
tus for heating 12 182
tus for heating, 13, 182 Tungstates of rare earths, 17, 483, 520
Tungstates and molybdates, complex (abst.), 1, 111
Tungsten, action of carbonyl and sulphur chlorides upon, 15, 206:
alloy of, with iron, 19, 110: atomic weight of, 17, 208; 19, 367; 19,
657; 20, 167: chemical behavior of, 17, 381: determination of, in
alloys (abst.), 11, 53: determination of, in aluminum alloys, 18,
774: separation of, from molybdenum, 19, 242: separation of, from
vanadium, 18, 1053
Tungsten bronzes (abst.), 4, 266: chlorides and oxychlorides (abst.),
2, 182: hexabromide, 18, 1098: minerals, indium in 20, 811: oxides,
19, 213: oxynitrides, 19, 236: trioxide, chemical behavior of, 17, 381
Tungstic acid, separation of, from silicic acid, note on, 19, 377: from
stannic oxide (abst.), 9, 200: from vanadic acid (abst.), - 12, 175
Turkey-red oil, determination of water in (abst.), 1, 367
Turpentine, American oil of, 16, 844: French oil of, action of acetic
acid on (abst.), 8, 71: oil of, transformation of, into optically ac-
tive terpilene (abst.), 8, 72 Typhoid fever at Mt. Holly, N. J., in 1887, 9, 146
Typhoid fever at Mt. Holly, N. J., in 1887, 9, 146
Tyrosin, constitution of (abst.), 2, 368 Tyrotoxicon, certain reactions for, 12, 485 Ulmic bodies, synthesis of (abst.), 2, 365
Tyrotoxicon, certain reactions for, 12, 485
Ulmic bodies, synthesis of (abst.), 2, 365
Ultimate analysis, calorimetric bomb as a combustion furnace for
(abst.), 10, 172
Ultramarine (abst.), 9, 210: constitution of, 2, 381: contributions to
history of (abst.), 1, 395: silver, some reactions of (abst.), - 1, 163
Ultramarine blue, from silica (abst.), 7, 172 Ultramarines, organic, formation of (abst.), 1, 171, 277
Ultramarines, organic, formation of (abst.), 1, 171, 277
Unsaturated acids, aromatic (abst.), I, 242: researches upon (abst.), I, 236
Uralium, atomic weight and properties of (abst.), - 1, 527
Uranates, production of crystallized (abst.), 5, 120
Uraninite, the gas in, 17, 421
Uranium, electrolytic determination of, 20, 279: properties and atomic
weight of (abst.), 5, 25: separation of, from iron, with hydrogen
peroxide, 20, 514: separation of, from zirconium, with hydrogen
peroxide, 20, 514
Uranium acetate, as a reagent for albuminoids (abst.), 7, 291: dioxide,
17, 687: fluorine compounds (abst.), 5, 97: nitrate, direct titration
of phosphoric acid with (abst.), 9, 118: oxynitride, 17, 686
Uranium minerals from North Carolina, examination of (abst.), - 1, 281

Uranyl chloride, compounds of, with ammonia (abst.), 7, 121: sele-	
nates and selenites (abst.), 1, 25,	5
Urea, action of hypochlorites on (abst.), I, IOI: action of alcoholic	
potassium hydroxide on (abst.), 8, 166: apparatus for rapid estima-	
tion of, 7, 72: determination of, by means of alkaline hypochlorites	
and hypobromites (abst.), 2, 132: determination of, destruction of	
foam in (abst.), 9, 123: determination of, rapid method for, 12, 283:	
determination of, with sodium hypobromite (abst.), 2, 430: deter-	
mination of, in urine (abst.), 4, 196: on Doremus' apparatus for	
estimation of, 7, 166: on Doremus' apparatus for estimation of, re-	
buttal, 7, 168: formation of, from albumin (abst.), 12, 475: heat	
of solution of, in water and in ethyl alcohol, 18, 156: influence of	
sugar on determination of (abst.), 2, 132: new ferment for (abst.),	
r, 387, 488: review of Knop-Hufner method for the determination	
of (abst.), 7, 292: transformation of carbon oxysulphide into	
(abst.), 4, 236: transformation of, into cyanamide (abst.), - 4, 22	I
Urea acrolein, 5, 3	
Urea chloride synthesis, modification of (abst.), 12, 22	
Ureas, condensed, remarks upon Schiff's publications upon, 5, 36:	)
substituted, action of alcoholic potassium hydroxide on (abst.), 8, 16	56
Ureameter, new form of, 7, 72; 8, 96; 15, 65	
Urethane, heat of solution of, in water, methyl, ethyl, and propyl	,0
alcohols, chloroform, and toluene, 18, 15 Urethane, camphol- (abst.), 4, 23	
Urethanes of the aliphatic series, two properties of (abst.), 8, 16	
Urethanes, dithio- (abst.), 4, 26	58
Uric acid (abst.), 7, 29: derivatives of alloxan series, syntheses of	
(abst.), 1, 172, 275: determination of (abst.), 8, 78: influence of	
glycerol and fat on the secretion of, in man (abst.), 8, 185: in	
urine, rapid estimation of, 19, 64	19
pseudo-Uric acid (abst.), 1, 38	39
Urinary calculi, analyses of, P. 1, 2, 6	50
Urine, bacterial, determination of albumin in (abst.), 12, 415: and	
blood, peptones in (abst.), 8, 231: composition of normal, 19, 382:	
determination of albumin in (abst.), 10, 197: determination of	
bile constituents in (abst.), 12, 414: determination of uric acid in,	
19, 649: diabetic, β-hydroxybutyric acid in (abst.), 7, 177: ethyldi-	
acetic acid in (abst.), 1, 254: healthy, nitric acid in, and method	
for its determination, P. 2, 98: of herbivorae, source of hippuric	
acid in (abst.), 2, 138: imperfectly oxidized phosphorus in (abst.),	
6, 129: large crystals in old (abst.), 4, 174: and milk of herbivorae,	
estimation of nitrogen in (abst.), 8, 279: mineral constituents of,	
P. 1, 2, 61: paraxanthine in (abst.), 5, 65: pathological (abst.),	
7, 288: rapid method of estimating urea in, 12, 283: volatile fatty	
acids in (abst.), 8, 86: see also Urea, Ureameter, Uric acid.	
Uruguay, chemical study of products of (abst.), 4, 23	
Valence of oxygen and structure of its compounds (review) - 18, 28	33

Valence, teachings of, in relation to the electro-chemical theory
(abst.), 2, 291
Valeric acid, hydroxy-, from allyldimethylcarbinol (abst.), - 2, 178
Vanadates, thio- (abst.), 12, 472
Vanadic acid, separation of, from tungstic acid (abst.), 12, 175: volu-
metric determination of (abst.), 1, 97
Vanadium, compounds of, in soda liquors (abst.), 4, 73: determination
of, P. 1, 61: determination of, by means of oxycellulose (abst.), 8,
78: extraction of, from basic slags of Creusot (abst.), 4, 241: occur-
rence of, in American hematites, etc., P. 1, 84: occurrence of, in
American magnetites, P. 1, 58: separation of, from arsenic, 18,
1051: volumetric estimation of, in presence of small quantities of
chromium, 20, 461
Vanadium oxychloride, preparation of (abst.), 8, 71: trichloride from
vanadium trisulphide (abst.), 5, 50
Vanillin in certain unrefined beet sugars (abst.), 2, 368: new deriva-
tives of, preliminary note on, 20, 316
Vapor density, determination of, 12, 399: (abst.), 1, 170; 4, 176: deter-
mination of, below the boiling-point (abst.), 12, 168: determina-
tion of, at high temperatures, for substances which attack mer-
cury (abst.), 1, 377: determination of, in a vacuum, limits of the
method (abst.), 1, 292, 380: observations on (abst.), - 2, 371
Vapor tensions of mixtures of volatile liquids, 17, 615, 690
Vapor pressures, new method of determining (abst.), - 7, 53
Vaporization of metals in vacuo (abst.), 4, 242
Varnishes, analysis of, 16, 344
Vegetable tissues, general method for analysis of (abst.), 1, 345
Vegetation, determination of oxalic acid in (abst.), 8, 37: injury to,
by gases from manufacturing processes (abst.), 6, 198: researches
in (abst.), 8, 21
Velocity of reactions (abst.), 2, 368: of the reaction between ferrous
chloride, potassium chlorate, and hydrochloric acid, - 19, 199
Ventilation as measured by carbon dioxide in the air, 15, 572
Veratralbine, chemistry of (abst.), 1, 554
Veratrine, chemistry of (abst.), 1, 553
Vesbium (abst.), 2, 224
Vesuvius, ashes from, composition of (abst.), 4, 237
Vetch, proteids of the, 18, 583; 20, 406, 410 Vibrations, sonorous, chemical stability of matter under influence of
(abst.), 2, 433
Vicilin, a proteid from the horse-bean, pea, etc., 20, 348, 414: proper-
ties of, 20, 414
Vignin, a proteid of the cow pea, composition and properties of, 19, 497
Vinaconic acid, constitution of (abst.), 7, 82: synthesis of (abst.), - 7, 81
Vinegar, analysis of, and some characteristics of pure cider vinegar,
20, 3: analyses of, 2, 335: and cider, 7, 102: determination of acetic
acid in, 17, 741, 83

230 INDEX OF SUBJECTS.
Vinyl bromide and tribromide, remarks on the action of, on ben-
zene in the presence of aluminum chloride (abst.), - 6, 166
Violet, Lauth's, spectroscopic examination of, 6, 304
Viscosimeter, torsion, 15, 173: standardizing of, 15, 454
Viscosimetry (abst.), 8, 109
Viscosity, catalytic phenomena caused by (abst.), 1, 386
Vitriol. See Sulphuric acid.
Vitellin and conglutin, 18, 609
Volhard's method of determining manganese, sources of error in, - 18, 498
Volta prize (abst.), 5, 121
Voltameter, new form of, 13, 207: silver, use of Gooch crucible as, - 12, 300
Volume alteration attending the mixture of salt solutions (abst.), - 5, 97
Volume. See Molecular volume, etc.
Volumes, additions to the law of (abst.), 1, 168: of solutions of hy-
drated salts, relations to water of composition (abst.), - 1, 392
Volumenometer (abst.), 1, 90, 586: simple form of (abst.), - 1, 379 Volumeter, a new gas- (abst.), 12, 175
Volumeter, a new gas- (abst.), 12, 175  Volumetric analysis, use of the term "normal" in (abst.), 10, 114
Volumetric apparatus, 20, 731: government facilities for standardi-
zing, 20, 912
Wages of chemical workers in United States, 15, 568
Wages of chemical workers in United States, 15, 568 Wall papers, amounts of arsenic found in various, 2, 339
Walnut, proteids of the, 18, 616
Walnut oil (abst.), 8, 184
Wanklyn and Adams' method for estimating fat in milk, 12, 488
Want column in Journal, report of committee on, 20, 234
Wash bottle, Chapman, 13, 126: with compressed air, 16, 148: for hot
water, 17, 517: useful form of, 19, 584
Washington Section, meetings of, 17, (3), (23), (35), (40), (70); 18,
(27), (36), (57), (66), (75); 19, (10), (16), (23), (28), (35), (43):
20, (2), (31), (48), (65), (71), (106).
Water, action of, on bismuth iodide (abst.), 4, 142: action of, on lead
pipe, 13, 176: action of, on zinc and lead (abst.), 2, 432: analysis
of remarkable sample of, 14, 34: in alcohol, detection of traces of,
1, 38: clarification of, by alum (abst.), 7, 200: combination of,
with salts (abst.), 8, 179: of crystallization of alum (abst.), 9, 100:
of crystallization, specific volume of (abst.), 2, 350: distilled, ap-
paratus for obtaining, from service steam, P. 1, 211: distilled,
free from ammonia, preparation of (abst.), 1, 586: hygiene of, 19,
(18): microscopic examination of (abst.), 1, 367, 578: in milk,
determination of (abst.), 4, 188: natural aperient, variability of
(abst.), 10, 183: potable, and disease, 9, 44: potable, filtration of
(abst.), 6, 140: rain, action of impure, on lead pipes, P. 1, 66: rain,
proportions of chlorine and nitrogen in tropical, 19, 1: river, al-

leged sterilization of, by mine water, 12, 12: snow, examination of, 6, 187: softening of, by the Porter-Clark process (abst.), 6, 103: softening of, by use of fluorides, 12, 303: spring, unusual form

of, 14, 115; for use in boilers (abst.), 10, 172; for use in boilers, purification of, 15, 610: volumetric composition of, - - 12, 275 Water analysis: alkalinity or acidity of potable waters, P. 2, 71: ammonia test in waters (abst.), r, 565: ammonia process for water analysis, 5, 104: the ammonia method, with some new apparatus, 12, 457: collector for ammonia distillate, 20, 286: bacteria, testing for (abst.), 1, 103: chemical versus bacteriological analysis, 18, 166: bacteriological examination, sanitary value of a, 19, 591: carbon (and nitrogen), determination of, in waters, 9, 162: carbon dioxide, free, in water (abst.), 10, 71: estimation of carbon dioxide in water, by titration, 13, 98: chlorine, estimation of, in water, 16, 71: colors of natural waters, measurement of, 18, 264: valuation of color in, 18, 488: colorimeter for (abst.), 4, 163: coloring matter of natural water, 18, 68: hardness in waters, remarks on determination of (abst.), 6, 170: Clark's method for estimating of hardness in waters, 13, 114: lithium, determination of, in mineral waters, 12, 214: nitrates and nitrites, determination of, in water (abst.), 4, 163: determination of nitrates, 16, 72, 122, 193: determination of nitrites, 18, 21: test for nitrites in water (abst.), 4, 163; detection and estimation of nitrous acid in waters, I, 136: nitrogen, organic, determination of, in waters (abst.), 4, 162: nitrogen and carbon, determination of, in waters, 9, 162: organic matter in water, actinic method for determination of, 8, 269: direct oxidation of, 14, 233: differentiation of, 20, 497: platinum iodide as a reagent for deleterious, 5, 74: organic purity of water, determination of (abst.), 1, 106: phosphoric acid, determination of, in contaminated waters (abst.), 9, 174: potable waters, analysis of, P. I, 201: examination of (abst.), 4, 162: technical analysis of water (abst.), 12, 73: examination of water for technical purposes (abst.), 10, 180: Wanklyn's method of water analysis, necessity of standard conditions in, 8, 221: zinc in water, volumetric determination of (abst.), 1, 564: zinc in potable water (abst.), 6, 77, 214 . . . . . Water analysis, P. 2, 1; (abst.), 9, 219; 12, 413: chemical, versus bacteriological, 18, 166: improved methods of, 17, 296: modes of combination of the elements indicated in (abst.), - - 1, 336 "Water" results and the public (abst.), - -Water supply, of Albany, N. Y., 7, 261: of Asheville, N. C., examination of, 8, 154; of cities in United States, relative to purity of, 3, 98: of Jersey City and Newark, pollution of, 9, 81: of New York City, 4, 15: of New York City, contamination of, 4, 127: of New York City, study of, 8, 3: of Philadelphia, - -8, 126 Water supplies, the quality of, -Waters, of the Auvergne, mineral (abst.), 1, 271: of the Bourbole, analyses of (abst.), 2, 365, 431: Buxton thermal, analysis of (abst.), 4, 170: Croton, examination of, 8, 147, 157: from the Dismal Swamp, examination of, 8, 153: from Irondale, W. Va., analysis

of, mineral, 6, 123: from Isthmus of Panama, analyses of (abst.), 4, 242: from Lake Hope, New Zealand, analysis of, 9, 168: from Marienbad, analysis of (abst.), 2, 135: mineral, containing iron and nitrates (abst.), 2, 431: from the Missouri lead region, analysis of, P. 1, 179: Niagara river, aeration and composition of, 12, 449: Niagara river, peculiar reaction of, 14, 221: of river Nile, analysis of, 15, 34, 84: from Rosheim, analysis of, mineral (abst.), 1, 491: of Susquehanna River at Cooperstown, N. V., examination of, 8, 150: from Texas, analysis of, mineral, 11, 141: of Yellow-

stone National Park, analysis of (abst.), 10, 188 Water-bath, constant level for, 16, 405: design for, -Watermelon, mineral constituents of, - - -Water-oven and still, new form of, - -Waterproofing, Chevallot's process for (abst.), -7, 158 Weighing flask, new calibrated, 19, 198: to serve as a burette, 15, 190 I, 250 Weldon-Pechiney process for manufacture of chlorine (abst.), -9, 224 Wells in cities and towns, necessity for inspection of, - - 13, 44 Wheat, copper normally present in (abst.), 4, 188: insoluble carbohydrates of, 19, 291: manganese in the ash of, P. 2, 141: nitrogen compounds in different varieties of, 2, 333: proteids of, - 16, 524 Wheat starch, constitution of, - - - -Whey, milk, and skim-milk, comparative study of, - - 15, 347
White lead, electrolytic process for manufacture of, - - 17, 835

Wine, alcohol in, determination of (abst.), 1, 573: alcohol in, correction for conversion of percentage by volume to percentage by weight of (abst.), 1, 572: champagne, clarification of (abst.), 4, 234: coloring-matters added to, systematic course for detection of (abst.), 1, 576, 577, 578: detection of aniline colors in (abst.), 1, 576: detection of artificial red coloring-matter in (abst.), 8, 81: detection of Bordeaux red in (abst.), 4, 191: detection of corallin in (abst.), 1, 576: detection of fuchsine in (abst.), 1, 574, 575, 576, 578: detection and determination of fuchsine in (abst.), 7, 291: detection of orange and yellow colors in (abst.), 8, 80: detection of free tartaric acid in (abst.), 1, 364: determination of acetic acid in (abst.), 1, 364: determination of astringent substances in (abst.), 4, 242: determination of extract in (abst.), 7, 63: determination of glycerol in (abst.), 2, 364; 4, 191: determination of phosphoric acid in (abst.), 11, 53: determination of red coloring-matters in (abst.), 4, 191: determination of sulphurous acid in (abst.), 4, 192: determination of tannin and ænogallic acid (abst.), 4, 191, 233: determination of tartaric acid in (abst.), 6, 97: examination of, for compounds of rosaniline (abst.), 8, 57: influence of plaster of Paris on the composition and chemical

character of (abst.), 6, 104: malt, 19, (30): method for analysis of
(abst.), 4, 189: normal percentage of sulphuric acid in (abst.),
1, 365: palm, composition of (abst.), 1, 402: presence of glycol in
(abst.), 4, 242: presence of sulphuric acid in (abst.), 1, 364, 365:
spirits of, composition of (abst.), 8, 58: sulphurous acid in (abst.), 4, 263
Wine oil (abst.), 1, 296
Wines of Alsace-Lorraine, analyses of (abst.), 9, 219: analysis of pure
(abst.), 6, 97: artificially colored claret (abst.), 5, 23: of bad years,
composition of (abst.), 4, 192: California, some characteristics of,
16, 597: California, coloring-matter in red, 17, 213: existence of
manganese in (abst.), 6, 200: Ohio, composition of, 20, 878: valua-
tion of (abst.), 6, 138
Wire drawing, lubricant for (abst.), 8, 275
Wollastonite, action of sodium hydroxide and carbonate on (abst.), 4, 199
Wood, analysis of (abst.), 1, 345: composition of, researches on the
(abst.), 1, 295: treatment of, in preparation of paper pulp, - 19, 314
Wood gum, composition of, 18, 214: from birch wood, 18, 218
Wool grease, 16, 535
Wool wash water. See Suint.
Wool, cotton, and silk, absorption of weak reagents by (abst.), - 5, 98
Wool and fur, origin, structure, composition, etc. (abst.), - 10, 184
Work, principle of maximum (abst.), 7, 138
World's Chemical Congress. See Congress of Chemists.
Writing, detection of fraudulent (abst.), 9, 224
Xanthine, transformation of, into theobromine and caffeine (abst.), 4, 264
Xanthine bases, formation of, from egg albumin (abst.), - 1, 165
Xylan, 18, 215
Xylene, derivatives of (abst.), 8, 96: relations of physical constants of
isomeric derivatives of (abst.), 8, 178: separation of, from crude
tar, naphtha, and crude benzenes (abst.), 6, 101
o-Xylene, derivatives of (abst.), 7, 115
o-, m-, and p-Xylene, determination of (abst.), 6, 101: p-Xylene, esti-
mation of (abst.), 7, 90
Xylenes, from English and Scotch tar (abst.), 7, 89: and phthalic
anhydride, acids produced from (abst.), 5, 17
p-Xylenes, dinitro-, constitution of three (abst.), - 7, 175
Xylenesulphamides, oxidation of (abst.), 1, 116, 283
Xylenesulphamides, oxidation of (abst.), 1, 116, 283 Xylenesulphonic acids, oxidation of, P. 2, 15
Xylenesulphamides, oxidation of (abst.), 1, 116, 283 Xylenesulphonic acids, oxidation of, P. 2, 15 Xylenol, brominated (abst.), 6, 132
Xylenesulphamides, oxidation of (abst.), 1, 116, 283 Xylenesulphonic acids, oxidation of, P. 2, 15 Xylenol, brominated (abst.), 6, 132 Xylidine, action of acrolein on, 5, 1: action of benzaldehyde on,
Xylenesulphamides, oxidation of (abst.), 1, 116, 283 Xylenesulphonic acids, oxidation of, P. 2, 15 Xylenol, brominated (abst.), 6, 132 Xylidine, action of acrolein on, 5, 1: action of benzaldehyde on, 8, 173: compounds of nickel and cobalt chlorides with (abst.),
Xylenesulphamides, oxidation of (abst.), 1, 116, 283 Xylenesulphonic acids, oxidation of, P. 2, 15 Xylenol, brominated (abst.), 6, 132 Xylidine, action of acrolein on, 5, 1: action of benzaldehyde on, 8, 173: compounds of nickel and cobalt chlorides with (abst.), 1, 165: compound of cenanthaldehyde with, 5, 2
Xylenesulphamides, oxidation of (abst.), 1, 116, 283 Xylenesulphonic acids, oxidation of, P. 2, 15 Xylenol, brominated (abst.), 6, 132 Xylidine, action of acrolein on, 5, 1: action of benzaldehyde on, 8, 173: compounds of nickel and cobalt chlorides with (abst.), 1, 165: compound of cenanthaldehyde with, 5, 2 1:2:4-o-Xylidine (abst.), 6, 162
Xylenesulphamides, oxidation of (abst.), 1, 116, 283 Xylenesulphonic acids, oxidation of, P. 2, 15 Xylenol, brominated (abst.), 6, 132 Xylidine, action of acrolein on, 5, 1: action of benzaldehyde on, 8, 173: compounds of nickel and cobalt chlorides with (abst.), 1, 165: compound of cenanthaldehyde with, 5, 2 1:2:4-o-Xylidine (abst.), 6, 162 Xylose and wood gum from straw, etc. (abst.), 12, 158
Xylenesulphamides, oxidation of (abst.), 1, 116, 283 Xylenesulphonic acids, oxidation of, P. 2, 15 Xylenol, brominated (abst.), 6, 132 Xylidine, action of acrolein on, 5, 1: action of benzaldehyde on, 8, 173: compounds of nickel and cobalt chlorides with (abst.), 1, 165: compound of cenanthaldehyde with, 5, 2 1:2:4-o-Xylidine (abst.), 6, 162

Yttrium, atomic weight of, 18, 209
Zinc, alloys of, with platinum metals, explosive (abst.), 4, 240: allyl
iodide, and butyl iodide, action of, on acetone (abst.), 7, 58: atomic
weight of, 18, 203: electrolysis of pyrophosphate of (abst.),
12, 170: magnesium and iron, as reducing agents with ferric salts
(abst.), 4, 223: in potable water (abst.), 6, 77, 214 Zinc acetate, water of crystallization of (abst.), 1, 158: ammonium com-
• pounds, manufacture and use of (abst.), 6, 139: bromide, prepara-
tion of hydrobromic acid from (abst.), 6, 32: chloride, combina-
tions of, with hydrochloric acid (abst.), 8, 163: chloride, hydrates
of (abst.), 8, 162: ferrite, artificial production of franklinite
(abst.), 9, 100: ferrocyanide, 18, 1100; 19, 542, 547: hydroxide,
crystallized (abst.), 7, 285: oxide in alkaline solutions, 2, 29:
oxide deposit in blast-furnace, analysis of, 4, 256: new oxychloride
of (abst.), 4, 239: sulphate and potassium hydroxide, reaction
between, 17, 358: sulphide, determination of (abst.), - 9, 35
Zinc, determination of, 17, 310: in aluminum alloys, 18, 776: electro-
lytic, 18, 659: (abst.), 1, 330: in potable water (abst.), 1, 564: by precipitation as oxalate (abst.), 1, 327: as pyrophosphate, 4, 26:
volumetric, 17, 473: (abst.), 1, 329, 534; 4, 166: volumetric, indi-
cator for (abst.), 4, 166: in zinc dust, 7, 136: (abst.), 9, 36: in
zinc ores (abst.), 4, 166; 12, 502
Zinc dust, action of, on benzyl chloride (abst.), 8, 181: occlusion of
hydrogen by (abst.), 7, 113: source of hydrogen occluded by
(abst.), 7, 286: and sulphur, experiments with (abst.), 5, 53:
valuation of (abst.), 12, 503 Zinc ethide, action of oxygen upon (abst.), 12, 156
Zinc ethide, action of oxygen upon (abst.), 12, 156
Zinc ores, notes on the analysis of, 11, 49
Zinc rods, peculiar corrosion of, 13, 286
Zinc, separation of, from aluminum (abst.), 1, 529: from arsenic, by hydrochloric acid gas, 18, 1041: from bismuth, electrolytic, 15,
104: from cadmium (abst.), 7, 296; 8, 277: from cobalt (abst.), 8,
277; 9, 9: from copper, electrolytic, 15, 103: from gallium (abst.),
4, 168: from iron (abst.), 1, 529; 8, 277; 9, 9: from manganese
(abst.), 1, 327; 8, 277: from nickel (abst.), 1, 332; 6, 288; 8, 277; 9, 9
Zinc tanks, action of water on (abst.), 2, 432
Zinc-copper couple, estimation of chlorates by (abst.), - 10, 26
Zirconates, a study of the, 18, 434
Zirconia, preparation of, 8, 91
Zirconium, revision of the atomic weight of, 20, 119: separation of, by means of sulphurous acid, 16, 475: separation of, from iron, 20,
846: separation of, from uranium, with hydrogen peroxide, - 20, 514
Zirconium chlorides, 17, 842: chlorides, examination of, 16, 469: diox-
ide, action of phosphorus pentachloride upon, 17, 654: dioxide,
some properties of, 20, 273: nitride, preparation of, 20, 843: oxa-
lates, 19, 12: oxybromides, 20, 324: oxychlorides, 20, 321: oxyio-
dides, 20, 328: sulphite, 17, 448: tetrabromide, derivatives of, 20,
839: tetrachloride, derivatives of, 20, 815: tetraiodide, - 18, 673

#### ERRATA.

Page.	Line.			LICIATA.
18		rom	top;	for potassium read rubidium.
23	20	"		this article should be entered under De Schweinitz
23	20		bottom ,	and Dorset.
29	5	"	top;	for 79 read 76.
32	I	66	6.6	" Föster read Foster.
34	21	"	"	" Cartenmeister read Gartenmeister.
35	18	"	bottom;	" 496 read 196.
37	15		top;	"Gottsch read Göttsch.
38	2	"	"	" 192 read 191.
40	12	"	"	insert Guthzeit, M. See Conrad, M.
42	14	6.6	"	for 202 read 203.
42	15	"	"	" 202 " 203.
42	19	6.6	6.6	add The valency of oxygen, etc., 18, 283.
45	14	6.6	"	for H. W. read R. W.
48	19	"	bottom,	" 5 read 4.
52	12	"	top;	" caffeine compounds read caffein compound.
54	8	"	"	" F. de read T. de.
54	24	"	"	" 224 read 225.
56	22	"	bottom;	" 247 " 147.
56	17	"	"	" actinium read actinism.
67	4	6.6	top;	after 2, 96 add 4, 206.
67	4	"	".	the article on tolylmethylketone belongs to
				MICHAELIS alone.
67	9	"	"	insert Michler, W. and H. Pattinson. Tetra-
				methylbenzidine (abst.), 6, 87.
68	23	"	"	for Monnety Cos read Monnet y Cos.
75	I	6.6	bottom;	insert Pattinson, H. See Michler, W.
77	10	"	top;	delete Some derivatives of hydrindonaphthene, 6,
				160.
77	14	"		for Smitt read Smett.
84	13	6.6	"	" 200 read 199.
85	24	"	top;	delete first comma.
85	25	"	"	for Peligot read Péligot.
91	20	"	bottom;	
92	8		. "	insert Smith, H. W. See Dixon, H. B.
94	ΙI	6.6	"	for Staedel read Städel.
96	21	"	top;	" 230 read 228.
108	14	"	bottom;	insert Wright, C. R. A. See also Roberts, W. C.
110	2	"	top:	for 75 read 74.
118	21	"	"	" 132 read 133.
121	9	"		after 166, add 5, 245.
122	6	"	top;	for 192 read 193.
123	19	"	4.6	after 260 add 18, 717, 721.

```
Page.
       Line.
         4 from bottom; for 857 read 587.
123
            "
                           " 189 " 188.
126
        16
                 top;
            "
                 bottom; add from lead, by hydrochloric acid gas, 18, 1033.
127
         5
129
                          for 1039 read 1038.
        23
            "
                   "
                            " 78 read 278.
129
        22
            "
                   "
                            " 56 "
                                       156.
129
        22
            "
                   66
                              78
                                   "
                                       278.
129
        20
                                   "
            "
                           66
                 top;
                               ſ
                                        2.
131
         9
            "
                           " 134
                 bottom;
                                       135.
133
         5
            "
                           " 802
                                   "
                                       803.
135
         9
                top;
            "
                 66
141
        19
                           after 165 add 12, 352.
            66
                 "
                          for 10 read 5.
143
         3
            66
                 66
                           after (68) add 18, (42).
144
         9
            "
                  "
                           for one read on.
144
        15
                           after 18 delete (abst).
         8
145
            "
                  "
                          for 141 read 241.
150
         2
            "
                  66
150
                            " 1038 " 1035.
         9
            "
                           " lecturer read lecture.
J51
        22
                 bottom:
            "
                   "
                           delete 14, 155.
        21
152
            "
                          for last 84 read 85.
153
        19
                 top;
            "
                           " 3 read 5.
159
        15
            "
                bottom; after from add 16, 697.
164
        12
            "
166
                          for 365 read 364.
        13
            "
                          after 710 add porcelain, 13, 195.
167
        21
                top;
            "
                bottom; read and ozone, 2, 34, 147, (abst.), 2, 59.
171
         2
            "
                top;
                          after analysis add 18, 918.
172
         Ι
            "
                 "
                          add iridium, industry of (abst.), 7, 66.
175
         3
            "
        10
                 bottom; for 271 read 721.
175
            "
                   "
                           delete 245.
176
         5
            "
                   "
                           after 801 add from antimony, by hydrochloric
178
        IO
                             acid gas, 18, 1033.
183
         8
            "
                   "
                          for metyl read methyl.
            "
                            " 14 read 13.
184
         5
            "
                   "
186
                           delete 520.
        17
            "
                   "
187
                          for 362 read 361.
         9
                   "
190
        13
                            " herbivora read herbivorae.
                   "
            "
194
        21
                           after 385 add valence of, 18, 233.
            66
                   66
                           read dioxide, 2, 34, 147, (abst.), 2, 59.
194
         4
            "
                   "
         8
                           delete 233.
195
            "
                   "
                          for phenthrene read phenanthrene.
197
        24
                   "
199
        18
                           after 210 add 9, 218.
            4 6
                   "
        12
                          for 295 read 925.
199
            "
204
        6
                top;
                          after 83 add 90.
            "
                bottom; for 2 read 1.
204
        24
            "
                   "
                          after pea add 18, 583.
204
         4
            "
                   "
                                vetch add 18, 583.
204
         Ι
```

Page.	Line.						
216	10 1	rom	top;	afte	er 18 add	170.	
217	11	"	bottom;	for	I read 2		
218	23	"	"	"	178 read	<i>l</i> 187.	
220	23	6.6	"	aft	er 251 ad	d 942	
22I	20	"	top;	for	tannins	read	tannin.
224	14	"	bottom;	"	451 read	<i>l</i> 541.	



### THE JOURNAL

-OF THE-

# AMERICAN CHEMICAL SOCIETY.

### GENERAL INDEX

-TO THE-

## FIRST TWENTY VOLUMES,

1879-1898,

-AND TO THE-

PROCEEDINGS, 1877-1879.

EASTON, PA.: THE CHEMICAL PUBLISHING CO. 1902.















